

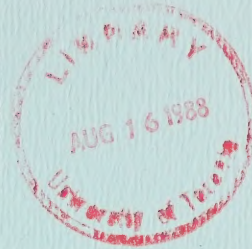
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# ENVIRONMENTAL ASSESSMENT BOARD

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VOLUME: XXIX

DATE: Monday, August 8th, 1988

BEFORE: M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member


A. KOVEN, Member

FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

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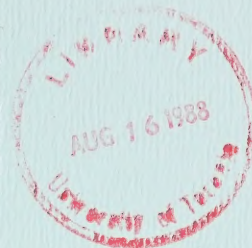
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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL  
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR  
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental  
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental  
Assessment for Timber Management on Crown  
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council  
(O.C. 2449/87) authorizing the  
Environmental Assessment Board to  
administer a funding program, in  
connection with the environmental  
assessment hearing with respect to the  
Timber Management Class  
Environmental Assessment, and to  
distribute funds to qualified  
participants.

-----  
Hearing held at the Ramada Prince Arthur  
Hotel, 17 North Cumberland St., Thunder  
Bay, Ontario, on Monday, August 8th, 1988,  
commencing at 1:00 p.m.

-----  
VOLUME XXIX

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member





A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
MS. C. BLASTORAH )	RESOURCES
MS. K. MURPHY )	
MR. B. CAMPBELL )	MINISTRY OF ENVIRONMENT
MS. J. SEABORN )	
MR. R. TUER, Q.C.)	ONTARIO FOREST INDUSTRY
MR. R. COSMAN )	ASSOCIATION and ONTARIO
MS. E. CRONK )	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY )	ASSOCIATION
MR. J. WILLIAMS, Q.C.	ONTARIO FEDERATION OF
	ANGLERS & HUNTERS
MR. D. HUNTER	NISHNAWBE-ASKI NATION
	and WINDIGO TRIBAL COUNCIL
MR. J.F. CASTRILLI)	
MS. M. SWENARCHUK )	FORESTS FOR TOMORROW
MR. R. LINDGREN )	
MR. P. SANFORD )	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
MR. D. WOOD )	POWER & PAPER COMPANY
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	LABOUR
MR. R. COTTON	BOISE CASCADE OF CANADA
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MR. Y. GERVAIS)	ONTARIO TRAPPERS
MR. R. BARNES )	ASSOCIATION
MR. R. EDWARDS )	NORTHERN ONTARIO TOURIST
MR. B. McKERCHER)	OUTFITTERS ASSOCIATION
MR. L. GREENSPOON)	NORTHWATCH
MS. B. LLOYD )	





APPEARANCES: (Cont'd)

MR. J.W. ERICKSON, Q.C.)	RED LAKE-EAR FALLS JOINT
MR. B. BABCOCK )	MUNICIPAL COMMITTEE
MR. D. SCOTT )	NORTHWESTERN ONTARIO
MR. J.S. TAYLOR)	ASSOCIATED CHAMBERS OF COMMERCE
MR. J.W. HARBELL)	GREAT LAKES FOREST
MR. S.M. MAKUCH )	PRODUCTS
MR. J. EBBS	ONTARIO PROFESSIONAL FORESTERS ASSOCIATION
MR. D. KING	VENTURE TOURISM ASSOCIATION OF ONTARIO
MR. D. COLBORNE	GRAND COUNCIL TREATY #3
MR. R. REILLY	ONTARIO METIS & ABORIGINAL ASSOCIATION
MR. H. GRAHAM	CANADIAN INSTITUTE OF FORESTRY (CENTRAL ONTARIO SECTION)
MR. G.J. KINLIN	DEPARTMENT OF JUSTICE
MR. S.J. STEPINAC	MINISTRY OF NORTHERN DEVELOPMENT & MINES
MR. M. COATES	ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI	BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY
MR. R.L. AXFORD	CANADIAN ASSOCIATION OF SINGLE INDUSTRY TOWNS
MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON





APPEARANCES: (Cont'd)

MR. C. BRUNETTA

NORTHWESTERN ONTARIO  
TOURISM ASSOCIATION





I N D E X   O F   P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>JOHN EDWARD OSBORN, Recalled</u>	
<u>KENNETH A. ARMSON, Recalled</u>	
<u>DAVID GORDON, Sworn</u>	
<u>JOHN RANDOLPH CARY, Sworn</u>	4790
Direct Examination by Mr. Freidin	4792





I N D E X   O F   E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
135	Witness statement of Panel No. 4	4803
136	Document dated April, 1972 entitled: Forest Production Policy Options for Ontario.	
137	Document entitled: Silvicultural Definitions.	4827
138	Table 4, Summary of Policy Options with overlay showing chosen level.	4859
139	Copy of overhead relating natural and artificial to regeneration treatments.	4867
140	Question and Answer to Interrogatory Question No. 4 posed by MOE.	4932





1       ---Upon commencing at 1:05 p.m.

2                       THE CHAIRMAN: Thank you, ladies and  
3 gentlemen. Welcome back to the great north. Please be  
4 seated.

5                       I trust everyone had an opportunity to  
6 recharge batteries because we are hoping in this next  
7 few weeks to cover as much ground as we can before the  
8 next lengthy break in October.

9                       There is just a couple of scheduling  
10 things that we would like to advise you of. Firstly -  
11 and again I apologize for this - tomorrow afternoon we  
12 are going to break about a quarter to four or four  
13 o'clock. I have to be in Toronto tomorrow night for a  
14 meeting, and we will be starting the following morning  
15 at hopefully 11:30 and then go until one or so before  
16 we break for a short time for lunch.

17                      Maybe, depending on where we are in the  
18 evidence, sit a little bit longer tomorrow; so I do  
19 not think we will really lose any hearing time.

20                      In addition, I understand that Mr. Edwards  
21 has a statement he would like to make for the record  
22 regarding some cross-examination that he would like to  
23 conduct with respect to Mr. Armson when he was away. I  
24 have asked him to put that on the record so we can  
25 consider that request.

1                   MR. EDWARDS: Thank you very much, Mr.  
2           Chairman.

3                   Mr. Chairman, as I advised you, I am  
4           required to attend in southern Ontario on a family  
5           matter which I think will take the balance of this week  
6           and perhaps early on into next week.

7                   I understand that the estimate of Panel 4  
8           is that the examination-in-chief will take much of this  
9           week if not all of this week and cross-examination  
10          would start next week. I know there has been an order  
11          of scheduling for cross-examinations, but I was asking  
12          the Board's indulgence in allowing me perhaps some  
13          flexibility in plugging my hour or two of  
14          cross-examination of Dr. Armson some time next week at  
15          a mutually convenient time.

16                   I expect that I will be back in Thunder  
17          Bay by Wednesday of next week.

18                   THE CHAIRMAN: And that, as I understand  
19          it, Mr. Edwards, will include the cross-examination  
20          with respect to some earlier panels of Mr. Armson as  
21          well; is that correct?

22                   MR. EDWARDS: Yes, Mr. Chairman. I had  
23          not cross-examined on Panel 2 or 3 and I have just a  
24          few questions which would arise properly out of the  
25          evidence given on those panels as well.



1 I expect the full length of my cross will  
2 be perhaps two hours.

3 THE CHAIRMAN: Very well. Are there any  
4 objections to this request?

5 (No response)

6 Very well, Mr. Edwards, we will slot in  
7 an appropriate time next week.

8 MR. EDWARDS: Yes. Thank you very much,  
9 Mr. Chairman. I thank my fellow counsel.

10 THE CHAIRMAN: Mr. Freidin?

11 MR. FREIDIN: Was it Wednesday he wanted  
12 to cross-examine or some time after Wednesday. I am  
13 just thinking if the panel happens to finish past the  
14 Wednesday.

15 MR. EDWARDS: It is most likely that I  
16 will not be returning until after Wednesday of next  
17 week much, probably Thursday of next week. I will stay  
18 in touch by telephone with somebody here to find how  
19 out the panel is going.

20 If appears it is going to be a problem, I  
21 will try to make some alternate arrangements.

22 THE CHAIRMAN: Well, you realize that  
23 next week we will be sitting Monday through Thursday so  
24 we will be rising on Thursday and we will not be  
25 sitting Friday.

1                   MR. EDWARDS: Yes. I would then hope to  
2 be able to cross-examine on Thursday.

3                   THE CHAIRMAN: Very well.

4                   Are there any other preliminary matters  
5 to be taken care of at this time?

6                   MS. BLASTORAH: Mr. Chairman, one small  
7 matter. We have provided Mr. Martel with a copy of  
8 this book by Gene E. Likens, Bio-Geophysical Chemistry  
9 of a Forested Ecosystem.

10                  That was the library copy. I think we  
11 indicated at that time that we would give you another  
12 copy. Perhaps I can give you that at the break.

13                  THE CHAIRMAN: Very well. Thank you.

14                  All right, Mr. Freidin, are we ready to  
15 go with this panel?

16                  I think we may have to swear two members  
17 of this panel. Mr. Armson, you would still be under  
18 oath and so would you, Dr. Osborn, but I think Mr. Cary  
19 and the other gentleman may have to be sworn.

20                  Would you step forward, please.

21                  JOHN CARY, Sworn  
22                  DAVID GORDON, Sworn  
23                  JOHN EDWARD OSBORN, Recalled  
                  KENNETH A. ARMSON, Recalled

24                  THE CHAIRMAN: Ladies and gentlemen, just  
25 before we commence, I also wanted to notify you for the

1 record that, as you are aware, the Board has completed  
2 the first of probably what will be a series of site  
3 visits the week before we broke and certain  
4 representatives of the parties accompanied us, as well  
5 as one member of the media, although that member of the  
6 media alternated with other individuals at certain  
7 locations.

8 It is the Board's intention to place on  
9 the record, probably later this week, an account of  
10 where we went, who accompanied us, and what activities  
11 or locations we viewed in terms of the site visit. We  
12 would like to comply with the requirements, as you are  
13 aware, of the Board's own Rules of Practice and  
14 Procedure and that information should properly go on  
15 the record.

16 We will probably have it available in  
17 some kind of written format which we will read into the  
18 record and then perhaps distribute a copy of that  
19 document to the parties. We do not propose that there  
20 be any discussion during the course of the hearing on  
21 the Board's visit itself and we do not intend to make  
22 any comments about what we saw either, other than that  
23 factual information.

24 MR. FREIDIN: Mr. Chairman, I would just  
25 like to take a very short period of time, five minutes



1 and I will try to qualify each witness.

2 THE CHAIRMAN: Quickly. We are not going  
3 to let this blossom out into a full-blown  
4 qualification, so please keep your comments brief.

5 MR. FREIDIN: I won't even try.

6 DIRECT EXAMINATION BY MR. FREIDIN:

7 Q. Mr. Cary, I understand that you  
8 graduated from Trinity College in Dublin, Ireland in  
9 1969 with a Bachelor of Arts Degree?

10 MR. CARY: A. That's correct.

11 Q. And that you graduated from the  
12 Lakehead University here in Thunder Bay in 1973 with a  
13 Bachelor of Science in Forestry?

14 A. That's correct.

15 Q. With an Honor's Degree?

16 A. That's right.

17 Q. And I understand that with the  
18 exception of a period 1978 to 1981, from the period '73  
19 to September of 1981, you were a field forester on a  
20 number of management units employed by the Ministry of  
21 Natural Resources?

22 A. Two management units, one in Dryden  
23 and one in Thunder Bay.

24 Q. And was one a Crown unit and one a  
25 company unit?

1 A. That's correct.

2 Q. And the period 1978 to '81 you were  
3 on a special assignment in Guyana regarding forestry  
4 management in that country?

5 A. That's correct.

6 Q. I understand that you moved from the  
7 field to main office of the Ministry in 1981 and have  
8 held a number of positions at main office since that  
9 time?

10 A. Yes.

11 Q. That your present position is senior  
12 project adviser Class Environmental Assessment for  
13 Timber Management, Planning and Environmental  
14 Assessment Branch?

15 A. That's correct.

16 Q. And I understand that the two  
17 positions you held before you started in that position  
18 in October of 1987 were as follows: The manager of  
19 Forest Production in Control Section, December of '85  
20 to October of '87, and before that you were the  
21 manager, strategic targets in program And control  
22 section of the Forest Resources Branch?

23 A. That's correct.

24 Q. Would you describe briefly your  
25 responsibilities in relation to those two positions?

1                   A. In Forest Resources Branch I was  
2                   responsible for the coordination of the provincial  
3                   stock production program, the provincial tree  
4                   improvement program, and also in the position of  
5                   manager strategic targets responsible for the  
6                   coordination of the provincial field silvicultural  
7                   operations.

8                   Q. And could you explain what that  
9                   entailed?

10                  A. I provided advice to the two field  
11                  assistant deputy ministers, one in southern Ontario and  
12                  one in northern Ontario and the executive coordinator  
13                  of Forest Resources group.

14                  The advice developed from an examination  
15                  of, for example, the provincial plans for stock  
16                  production, the annual provincial work plans and as a  
17                  result of examination of those, I made recommendations  
18                  to the field assistant deputy ministers.

19                  Q. All right. In the latter case, the  
20                  case of work plans, those recommendations would involve  
21                  recommendations regarding the allocation of programs,  
22                  financial resources; is that true?

23                  A. That's correct.

24                  Q. And were you involved during that  
25                  period of time in performing audits?



1 A. Yes, I was.

2 Q. What was involved in those audits?

3 A. We conducted regular operation audits  
4 of the regional programs; two in the north and two in  
5 the south each year.

6 Q. And the major part of your evidence,  
7 Mr. Cary, is going to be in relation to the Forest  
8 Production Policy and what responsibilities have you  
9 held in relation to that particular matter?

10 A. I have been responsible for  
11 monitoring, tracking the progress we made under it, and  
12 was involved with adjustment of the Forest Production  
13 Policy Implementation Schedule in the early 80s.

14 MR. FREIDIN: Mr. Chairman, I would ask  
15 that Mr. Cary based on those remarks and, more  
16 particularly, the written curriculum vitae, be  
17 qualified as an expert in forestry with particular  
18 expertise in the subject matter of forest production.

19 MR. CARY: That's correct.

20 THE CHAIRMAN: Any comments from anyone?

21 (No response)

22 Very well, he will be so qualified.

23 MR. FREIDIN: Q. Mr. Gordon, I  
24 understand that you graduated from the University of  
25 Toronto in 1975 with a Bachelor of Science Degree in

1 Forestry?

2 MR. GORDON: A. Yes.

3 Q. For two years thereafter you held a  
4 number of positions within the Ministry and private  
5 companies related to forestry?

6 A. That's correct.

7 Q. For those two years you were working  
8 on a contract basis?

9 A. That's correct.

10 Q. I understand that in 1977 you became  
11 fully employed with the Ministry of Natural Resources  
12 and became the management unit forester for the Steel  
13 River Crown management unit?

14 A. Yes.

15 Q. And that was in Terrace Bay District?

16 A. That's right.

17 Q. Perhaps you could point out on the  
18 map right behind where Terrace Bay District is?

19 A. Here is Terrace Bay District and  
20 Steel River is found approximately right here.  
21 (indicating)

22 Q. Okay. I understand you held the  
23 position of management unit forester on that Crown  
24 management unit until approximately 1986?

25 A. That's correct.

1 Q. And in this capacity that you were  
2 directly involved in numerous aspects of boreal forest  
3 management?

4 A. Yes.

5 Q. I also understand that you prepared  
6 timber management plans while the management unit  
7 forester there?

8 A. Yes.

9 Q. And how many plans did you prepare?

10 A. I prepared three major plans, a  
11 20-year plan and two five-year plans under the old  
12 planning system, under the old manual, the Forest  
13 Management Planning Manual.

14 Q. I understand that you were also  
15 involved in the development of the District Land Use  
16 Guidelines for Terrace Bay District?

17 A. That's correct.

18 Q. Very briefly, what sort of  
19 involvement?

20 A. I sat on the committee representing  
21 timber management aspects with the Terrace Bay  
22 District. I was involved with the district manager and  
23 other supervisors and resource people on that committee  
24 in developing guidelines that reflected current land  
25 uses as well as potential land uses.

1 Q. I understand that during part of the  
2 period 1985 to 1986 that you acted or served as acting  
3 forest management supervisor in Terrace Bay District?

4 A. That's correct.

5 Q. And that your responsibility during  
6 that time was to provide overall direction and  
7 leadership to the district forest management program?

8 A. That's correct.

9 Q. And for the other part of that period  
10 you continued your duties as the management unit  
11 forester on the Steel River Crown management unit?

12 A. Yes.

13 Q. I also understand your responsibility  
14 involved the carrying out of field environmental  
15 planning procedures related to the construction of  
16 access road corridors?

17 A. That's correct.

18 Q. And how did that particular process  
19 compare to the present timber management planning  
20 process in relation to roads?

21 A. Specifically we were carrying out  
22 that process to reflect the class exemption order. It  
23 was a requirement on Crown management units that we  
24 analyse primary access road corridors and relative to  
25 how many we do nowadays, that's part of the planning



1 process, we look at alternatives up front and document  
2 those alternatives, where in the past we didn't  
3 necessarily document all those alternatives.

4 Q. Okay. I also understand, Mr. Gordon,  
5 that you were responsible for carrying out something  
6 which was referred to as an old forest yield study; is  
7 that right?

8 A. That's correct.

9 Q. Can you sort of explain when you did  
10 this and what it was all about?

11 A. I did that just before I left Terrace  
12 Bay District, approximately 1986, and basically I looked  
13 in detail at the amount of old forest that was out  
14 there and what harvest it sustained and for how long.

15 Q. By old forest, what do you mean?

16 A. The forest that existed at the time  
17 of the analysis.

18 Q. Could you advise why you did that?

19 A. I wanted to have a good understanding  
20 of the volume that was out there. So if, for example,  
21 we were building a road access on that unit - it was a  
22 Crown unit - we were responsible for building the  
23 primary access. So, therefore, I wanted to have a good  
24 estimate of the volume of wood that was actually out  
25 there.

1                   Q. I understand that during 1986 you had  
2                   some -- you gained experience in relation to the new  
3                   timber management planning process the one which is  
4                   described in the Environmental Assessment Document when  
5                   you served as Chairman of the Plan Preparation  
6                   Committee for the forest management agreement unit  
7                   known as the Big Pic, P-I-C.

8                   A. That's correct. I became the acting  
9                   forest management supervisor. The district manager  
10                  asked me to chair this committee. I had just begun,  
11                  the previous supervisor had been chairing the  
12                  committee.

13                  I chaired the committee through the  
14                  period while the draft plan was being prepared. Just  
15                  after I moved to Toronto and the draft plan was  
16                  submitted.

17                  Q. You moved to Toronto at what time?

18                  A. I started work in Toronto in 1987.

19                  Q. I understand, Mr. Gordon, that you  
20                  were also involved in the standard contract document  
21                  for tree planting agreements?

22                  A. That's correct.

23                  Q. These are agreements between the  
24                  Crown and independent tree planting companies?

25                  A. That's correct.

1 THE CHAIRMAN: Mr. Freidin, I do not want  
2 to interrupt you, but all of this is set out word for  
3 word.

4 MR. FREIDIN: Two more questions, Mr.  
5 Chairman.

6 Q. I understand that your evidence will  
7 describe a number of surveys which are used as interim  
8 measures of regeneration effectiveness?

9 A. That's correct.

10 Q. And those include survival and  
11 stocking assessments?

12 A. That's correct.

13 Q. Have you been involved in that kind  
14 of work?

15 A. Yes, I have.

16 Q. Your evidence will also deal with  
17 free to grow and not satisfactorily regenerated  
18 surveys. Have you been involved in those types of  
19 surveys?

20 A. Not directly in surveys with those  
21 titles but surveys that look at the same things these  
22 surveys looked at.

23 Q. And your evidence is also going to --  
24 in your evidence you are also going to be describing  
25 the macro analysis of Ontario's wood supply, that large

1 portion of the witness statement at the end.

2 In doing that, assumptions regarding  
3 various factors affecting supply and demand are made;  
4 is that correct?

5 A. That is correct.

6 Q. And do you feel qualified to deal  
7 with that particular subject matter?

8 A. Yes, I do basically because of my  
9 planning background on management units, I have seen  
10 the plan implemented over five years which I are  
11 factors that should be considered.

12 THE CHAIRMAN: Mr. Gordon, I think you  
13 are going to have to move the microphone in closer to  
14 you because the court is having some difficulty  
15 hearing.

16 MR. GORDON: Okay.

17 MR. FREIDIN: Mr. Chairman, I ask that  
18 Mr. Gordon be qualified as an expert as a practicing  
19 field forester.

20 THE CHAIRMAN: Very well. He will be so  
21 qualified.

22 MR. FREIDIN: Mr. Chairman, perhaps I  
23 could begin by filing with the Board a clean copy of  
24 the statement of evidence of Panel No. 4: Ontario's  
25 Wood Supply, and a copy of a document which was



1 provided to the parties separate from the green-bound  
2 witness statement, and that is a document entitled:  
3 Forest Production Policy, Options for Ontario.

4 THE CHAIRMAN: Does that differ from what  
5 we have got in terms of the green copy?

6 MR. FREIDIN: It shouldn't.

7 THE CHAIRMAN: Okay.

8 MS. BLASTORAH: Mr. Chairman, just while  
9 Mr. Freidin is handing you that, I had a brief  
10 discussion with Mr. Mander and he indicated that I  
11 believe one of the Board members had not brought her  
12 copy of the separate document, so I indicated that if  
13 that Board member could use the exhibit copy for the  
14 time being, we would make arrangements to get you  
15 another copy.

16 THE CHAIRMAN: Thank you.

17 Mr. Freidin, would it be appropriate to  
18 enter these as two separate exhibits?

19 MR. FREIDIN: Yes.

20 THE CHAIRMAN: All right. The Panel 4  
21 witness statement will be Exhibit 135, I believe, and  
22 the Forest Production Policy, Options for Ontario,  
23 document dated April, 19 72, will be Exhibit 136.

24 ---EXHIBIT NO. 135: Witness statement of Panel No. 4.

25 ---EXHIBIT NO. 136: Document dated April, 1972

1                                   entitled: Forest Production  
2                                   Policy, Options for Ontario.

3                                   MS. BLASTORAH: Mr. Chairman, I also have  
4                                   copies of a letter dated June 13th, 1988 to the Board  
5                                   and the panel member -- or the parties list from  
6                                   Kathleen Murphy of our office which provides copies of  
7                                   corrections to the witness statement.

8                                   It is pages 160, 164, 194, 220 and 249.  
9                                   I have copies of that for the Board as well, if you  
10                                  don't already have it.

11                                 THE CHAIRMAN: All right. There appears  
12                                 to be those included in my witness statement, which is  
13                                 this document.

14                                 MS. BLASTORAH: I wasn't sure whether the  
15                                 Board would have these copies with them. So if you  
16                                 don't have them, we could give some extra copies.

17                                 THE CHAIRMAN: Well, We will need one for  
18                                 Mrs. Koven.

19                                 MS. BLASTORAH: Is there one in the copy  
20                                 that has been provided as an exhibit?

21                                 THE CHAIRMAN: It does not look like it.

22                                 MS. BLASTORAH: All right. I will  
23                                 provide an extra copy then.

24                                 THE CHAIRMAN: All right. I do not think  
25                                 these have to have a separate number; do they?

1 MS. BLASTORAH: They are just replacement  
2 pages, Mr. Chairman. I don't see any reason...

3 THE CHAIRMAN: Very well. It will all be  
4 part of 135.

5 Mr. Freidin?

6 MR. FREIDIN: Mr. Chairman, I would like  
7 to make a number of opening remarks before I begin my  
8 examination of Mr. Cary.

9 THE CHAIRMAN: It is not a whole new  
10 opening statement?

11 MR. FREIDIN: I am not sure what you mean  
12 by a new one?

13 THE CHAIRMAN: Well, you are going to  
14 have some brief remarks with respect, I take it, just  
15 to this panel's evidence; is that correct?

16 MR. FREIDIN: Oh yes, to try to tie it  
17 into what has gone before and perhaps what is coming  
18 later.

19 THE CHAIRMAN: All right. Very well.

20 MR. FREIDIN: Mr. Chairman, as you are  
21 aware, Panel No. 3 dealt with sustained yield in a  
22 theoretical or conceptual fashion. The evidence  
23 indicated that sustained yield was practiced on a  
24 management unit level, that in order to deal with local  
25 shortfalls in supply a system of analyzing woodflow has

1       been developed.

2                   The evidence also described yield  
3       regulation and, in particular, the calculation of the  
4       maximum allowable depletion on each management unit  
5       every five years.

6                   In later panels evidence will be led to  
7       demonstrate the application at the management unit  
8       level of the theory and the concept referred to in  
9       Panel No. 3.

10                  Whereas Panel No. 3 focused on sustained  
11       yield at the management unit level, Panel 4 will focus  
12       on sustained yield at the provincial level and the  
13       evidence of Panel 4 falls into five categories:

14                  Firstly, on pages 20 to 28 a description  
15       of Ontario's Forest Production Policy and the Forest  
16       Production Policy Implementation Schedule which  
17       provides direction to staff within the Ministry for the  
18       attainment of that policy.

19                  Secondly, at pages 28 to 33 a description  
20       will be given of a number of different surveys which  
21       are designed to be indicators of regeneration  
22       effectiveness at different stages in the life of a  
23       stand.

24                  Thirdly, at pages 33 to 37 there will be  
25       a description of a recent survey of areas planted and



1 seeded in the 1960s and in the early 1970s, designed to  
2 provide the basis for the answers to three questions;  
3 those questions being:

4 What is the extent of the artificially  
5 regenerated forest, where is that forest, and what is  
6 the condition, structure and composition of that  
7 forest?

8 That survey, Mr. Chairman, is referred to  
9 as SOARS, S-O-A-R-S, which stands for Survey of  
10 Artificially Regenerated Sites. And, in effect, that  
11 survey will provide some indication of what type of  
12 forests exists 15 to 20 years after planting and  
13 seeding with the technology which was in use during  
14 that time; that time being the 60s and the early 70s.

15 The fourth part of the evidence at pages  
16 39 to 52 will describe the results of five simulations  
17 of the future forest based on an assessment of the same  
18 factors in each case, but where different assumptions  
19 regarding those factors are made in each of the five  
20 cases.

21 And at page 52 to 53 there will be a  
22 review of the indication that the Ministry of Natural  
23 Resources is presently reviewing the present Forest  
24 Production Policy with a view to determining whether  
25 recommendation to Cabinet, government in relation to

1       that policy are advisable.

2                       In relation to the first matter, the  
3       Forest Production Policy, you will see by the witness  
4       statement that the Forest Production Policy is a  
5       government-made policy which indicates by the year 2020  
6       the province would like to have in place a new forest  
7       which would provide to the forest products industry 9.1  
8       million cunits of wood per year.

9                       The Forest Production Policy  
10       Implementation Schedule describes the type and the  
11       quantity of regeneration treatments and silvicultural  
12       activities which the Ministry believes are necessary to  
13       achieve that policy.

14                      The evidence will also describe the basis  
15       for that Policy and why and how the Implementation  
16       Schedule has been amended a number of times since 1972.

17                      Through this evidence and the evidence to  
18       be given in the second last part of the panel dealing  
19       with the five scenarios of the future forest, the Board  
20       will be introduced to the factors which should be  
21       considered when forecasting or projecting supply and  
22       demand and about which assumptions must be made.

23                      I should advise, Mr. Chairman, that it is  
24       clear -- or the evidence will indicate that these  
25       factors are the same regardless of the geographical

1 level at which the projection is made, whether you are  
2 doing the projection at the management unit level, of  
3 the province or somewhere inbetween. The evidence will  
4 also compare the planned level of activities under that  
5 Implementation Schedule and the actual activities  
6 implemented.

7 I should make it clear, Mr. Chairman,  
8 that it goes almost without saying that, in my opinion,  
9 that the Board, in assessing its decision regarding the  
10 appropriateness of the Ministry's proposed method of  
11 achieving the purpose of the undertaking, that it is  
12 important to consider the context in which the proposed  
13 activities will be planned and implemented. Part of  
14 that context is the Forest Production Policy which  
15 impacts upon timber management and it is that reason  
16 which has resulted in the Forest Production Policy  
17 being the subject of evidence in this panel.

18 As will be indicated in the next panel,  
19 that is Panel No. 5, the implementation of the  
20 activities described in the Forest Production Policy  
21 Implementation Schedule creates social and economic  
22 benefits today and the policy is intended to provide a  
23 certain level of benefits to the people of Ontario  
24 tomorrow; tomorrow in this particular context being  
25 from the year 2020 and thereafter. Mr. Cary is going

1 to be giving evidence in relation to that matter.

2 The second matter I indicated were  
3 interim measures. Because silviculture has been  
4 practiced in northern Ontario for such a relatively  
5 short period of time - by that I mean since the 1960s -  
6 and because activities conducted since 1972 when the  
7 Forest Production Policy was formulated are even more  
8 recent in time, a measure of whether those activities  
9 will achieve the final objective in a commercial timber  
10 sense; that is, providing furnish to industry, is not  
11 possible, it is just too early to be able to do that.

12 It is for that reason, amongst others,  
13 that evidence will be given to explain a number of  
14 interim measures which are used as proxies for  
15 assessing regeneration effectiveness. The evidence  
16 regarding the results of some of those proxy measures  
17 will also been given and what I am referring to when I  
18 am talking about these interim measures are survival  
19 assessments, stocking assessments, free to grow  
20 assessments, not satisfactorily regenerated surveys and  
21 the survey of artificially regenerated sites, SOARS,  
22 which I referred to a few moments ago.

23 The evidence will also include the actual  
24 results of some of those surveys and, as such, the  
25 evidence will provide an overall provincial picture.



1 I should advise however, Mr. Chairman,  
2 that the provincial picture at this time will not be an  
3 aggregation of results of each and every acre planted,  
4 seeded or treated in some way, or of areas which have  
5 regenerated by natural means only. The Ministry  
6 believes that it is appropriate that records of these  
7 activities are kept at the management unit level. They  
8 have not, however, been kept in a consistent manner.

9 You may recall comments I made during a  
10 discussion, I think during the last panel, that since  
11 the mid-60s, the official methods to be used in  
12 record-keeping has changed a number of times as have  
13 the standards which were used and as a result an  
14 aggregation of existing management unit records to  
15 portray the provincial picture at this time is neither  
16 very easy or, in my respectful submission, very useful.

17 In later panels the timber management  
18 planning process will be explained in some detail and  
19 as indicated in the earlier evidence, this timber  
20 management planning process will apply to all  
21 management units regardless of the type of management  
22 unit or the form of licences which permit operations to  
23 occur on those units.

24 Once that timber management planning  
25 process is phased in, so that all timber management

1 plans are prepared in a consistent fashion, forest  
2 managers will have an increased ability to aggregate  
3 results from regeneration treatments and silvicultural  
4 activities and other information at the management unit  
5 level up to the provincial scale.

6 In this Environmental Assessment, in  
7 explaining how timber management activities might  
8 affect the environment, it is necessary to indicate how  
9 those activities are planned and implemented in order  
10 to provide a sustained supply to Ontario's forest  
11 products industry. That explanation necessarily  
12 includes a description of the factors which affect  
13 supply and demand for timber and a description of the  
14 system and tools, including the common planning process  
15 which will be the subject matter of Panel 15's  
16 evidence.

17 Because of those things the Ministry  
18 is -- pardon me, it will be necessary to describe the  
19 system and tools that the Ministry is putting in place  
20 to increase the precision or to fine tune the  
21 information related to those factors.

22 Having comparable from all management  
23 units will over time permit better predictions relating  
24 to those factors And thereby to predict the forests of  
25 tomorrow. Consistently reported and recorded data in

1 timber management plans is also designed to enhance the  
2 Ministry's ability to improve silvicultural practices.

3 In Panel No. 3 there was evidence of  
4 forest managers preparing simulations about the future  
5 on individual management units. You will recall the  
6 evidence about MAD calculations and the use of a  
7 computer program called AWASFOP which was used by those  
8 managers to aid them in making those predictions.

9 The evidence to be given by Dr. Osborn  
10 and Mr. Gordon in relation to Ontario's wood supply  
11 projections will present the result of similar type  
12 modeling, but done not at the management unit level but  
13 on a macro scale and by that I mean across the area of  
14 the undertaking; that is, the size of the area which  
15 was the subject of their study or analysis.

16 The purpose of doing this is to  
17 demonstrate the Ministry's capability to make these  
18 type of projections and to provide to the Board and  
19 other parties an appreciation and understanding of what  
20 is involved in doing such modeling and how it is done.  
21 None of the five simulations - and I should stress this  
22 point - none of the five simulations which will be  
23 presented necessarily represents what will happen,  
24 rather they present a range of futures which may occur  
25 given the assumptions which were made.

1                   And the last piece of evidence that the  
2     Board will hear will be to update the Board on the  
3     status of the Ministry's review of the assumptions and  
4     forecasts upon which the 1972 Forest Production Policy  
5     was based. As indicated to Mr. Martel last month,  
6     obviously if that policy changes before this hearing is  
7     over, then the Board will be one of the first group of  
8     people to be advised.

9                   In any event, I can advise that a  
10    different process is going to be used for development  
11    of that Forest Production Policy than was used in the  
12    past and what I am referring to basically is that  
13    unlike the Forest Production Policy of 1972, it is  
14    intended -- it is the Ministry's intention to involve  
15    the public, to canvass the public, to have their input  
16    in relation to the new policy heard.

17                  There will be a number of position papers  
18    prepared that will be made available to the public  
19    along with a request for the public's comments. Mr.  
20    Cary at the end of the panel will provide that update  
21    on the Forest Production Policy.

22                  The one item that I just didn't refer to  
23    anywhere in my remarks, Mr. Chairman, is a short  
24    section after the section dealing with SOARS dealing  
25    with regeneration reporting. Mr. Armson will deal with



1       that.

2                       THE CHAIRMAN: All right. Just one quick  
3 question, Mr. Freidin. Given what you said, that the  
4 Ministry is in the process of developing a new Forest  
5 Production Policy and, unlike the one in 1972, is going  
6 to canvass the public for its views on what that policy  
7 should be, or at least on the draft papers presented to  
8 the public for their consideration, are we to take then  
9 that the Forest Production Policy options already in  
10 place, obviously for whatever reason, the Ministry has  
11 considered those to be inadequate or to be capable of  
12 being changed?

13                   MR. FREIDIN: Well, I think we will have  
14 to -- for the full explanation I would have to wait to  
15 hear Mr. Cary, but the Forest Production Policy is not  
16 necessarily a bad one or a good one.

17                   What the Ministry is doing is -- first of  
18 all, the Ministry of course don't make the policy, what  
19 they do is they provide recommendations to government  
20 as to what the policy should be.

21                   And the main reason that the Ministry is  
22 reviewing that document; that is because some of the  
23 assumptions on the factors used to predict long-term  
24 supply and demand appear now, with the passage of time,  
25 to be outdated.

1                   That doesn't necessarily mean that the  
2                   policy target is outdated, it may be that the  
3                   calculation of what activities are necessary in order  
4                   to achieve that target should be reassessed.

5                   THE CHAIRMAN: Okay. I guess I did not  
6                   frame my question very well.

7                   What I was trying to elucidate from you  
8                   was that if some of the major factors behind this  
9                   policy have changed, the major assumptions that went  
10                  into this policy have, by the inflection of time  
11                  changed, then the policy itself may or may not be  
12                  changed, it may still be good.

13                  That is something to await the verdict of  
14                  the review itself. But when this Board is considering  
15                  its decision and taking into context any policy, if the  
16                  review is not completed, what are we left with: We are  
17                  left with a policy based on assumptions that presumably  
18                  the evidence will show are somewhat outdated, we will  
19                  be left with the fact that a new policy might be  
20                  considered based on new assumptions, but the new policy  
21                  itself may not be in effect.

22                  So where does that leave the Board in  
23                  consideration of this Forest Production policy in the  
24                  first place, at this point in time, or as we go through  
25                  the hearing?

1 MR. FREIDIN: I don't think it should  
2 affect what evidence the Board hears about the policy  
3 or the background for the policy, because I indicated  
4 the main reason or one of the main reasons for  
5 providing information or evidence about the policy is  
6 that the policy is there.

7 I mean, if we came here and didn't tell  
8 you about the policy, I am sure somebody would say:L  
9 we know it exists and tell us about it. So we are  
10 doing that.

11 THE CHAIRMAN: We are not necessarily  
12 bound by it, in any event. We have to consider it, but  
13 we are not necessarily bound by it.

14 MR. FREIDIN: And in considering is the  
15 fact -- hearing evidence about it is exactly what the  
16 Ministry intends to do through the evidence primarily  
17 of Mr. Cary.

18 As I indicated, the evidence will be that  
19 the Forest Production Policy, because its couched in  
20 terms of a target, does have some impact on timber  
21 management activities in the province.

22 Primarily you will hear -- I shouldn't  
23 say primarily, you will hear from Mr. Cary how that  
24 particular policy has an effect on budget and how much  
25 monies are made available for regeneration treatments

1 or silviculture treatments in the province.

2 I don't believe that the Board's  
3 deliberations should be affected substantially by the  
4 fact that the policy may change. The factors -- the  
5 important thing, in my submission, is to understand the  
6 factors which are to be considered when one is trying  
7 to make such a policy or trying to make predictions of  
8 forests, future forests.

9 THE CHAIRMAN: Okay. Well, I guess all I  
10 can say on that point is: If the Ministry or the  
11 government wishes to have this Board take into account  
12 whatever future policy may be developed, they had  
13 better think about getting that policy finished and  
14 through, out in the public realm prior to the end of  
15 the hearing or else obviously we cannot take into  
16 account whatever new policy may or may not be  
17 developed.

18 MR. FREIDIN: That's well understood.

19 MR. MARTEL: Can I ask a question. When  
20 I read back -- when one looks at Mr. Armson's report of  
21 '76 it really does a number of things - and I don't  
22 want to misrepresent what Mr. Armson wrote in '76 - but  
23 certainly it was a criticism of the policy that existed  
24 in the province at the time and the targets that were  
25 going to be met based on the policy that existed from



1 '72 on. If we continued in that line, we can never  
2 meet the targets that were established.

3 I guess that's why I asked you a couple  
4 of weeks ago what we are going to do because policy --  
5 the policy in this paper, and I think what Mr. Armson  
6 wrote, are really at loggerheads to some degree and  
7 resulted in some changes or we could not have met the  
8 targets.

9 I think that is what Mr. Armson was  
10 afraid of when we wrote the report. I think - and hope  
11 I am not misreading the Armson report, which I read two  
12 or three times to make sure - I think there was a fear  
13 of a wood shortage at that time from what Mr. Armson  
14 wrote in his report in Ontario.

15 MR. ARMSON: If I might, Mr. Chairman.

16 MR. MARTEL: Yes.

17 THE CHAIRMAN: Yes, Mr. Armson?

18 MR. ARMSON: I did not in the report, Mr.  
19 Martel, taken issue with the policy and the targets per  
20 se. What the report was concerned with were really the  
21 activities that were being carried out by the Ministry  
22 at that time towards implementation of the target, but  
23 my concern was with the activities, the way in which  
24 they were being carried out.

25 Obviously then, you were quite correct,

1 in the criticisms that were there in relation to, for  
2 example, determining the land base and I think in the  
3 last panel we went into the extent, I was concerned  
4 about how the Ministry was defining the production base  
5 and what it would be doing with various elements of  
6 that base with regard to the production of timber and  
7 other uses.

8 I mean, that was the area. It wasn't the  
9 actual policy, nor in fact the target of that policy,  
10 per se, that I was really concerned about.

11 MR. MARTEL: Are you saying that the  
12 policy then that existed in '72 would have met a  
13 deadline or the projections by 2020 had we not changed  
14 any policy?

15 MR. ARMSON: I didn't -- in my report or  
16 nor the year study, I didn't take the actual numbers  
17 and what was being implemented in a quantitative way.  
18 I looked at the nature of the activities and certain  
19 elements of the quantification of those activities, but  
20 not strictly speaking in relation to the policy and its  
21 attainment in 2020. That I didn't look at.

22 MR. FREIDIN: I think some of the  
23 evidence of Mr. Cary, perhaps taken in conjunction with  
24 the evidence of Dr. Osborn and Mr. Gordon, will to a  
25 great deal address your concern.

1                   Mr. Cary will be giving evidence, as I  
2                   indicated, to compare the planned level of various  
3                   kinds of activity under the Forest Production Policy  
4                   Implementation Schedule and what has actually been done  
5                   in terms of activities and there will be an indication  
6                   that there is a difference between the two.

7                   I think, as I understand you, Mr. Martel,  
8                   you are sort of saying: Well, if there is a difference  
9                   what is the significance of the difference in terms of  
10                  what type of new forest may or may not exist in 2020 or  
11                  any particular future time.

12                  That information will be provided in a  
13                  general way at the end of the panel using some of the  
14                  information which will be provided by Mr. Cary in terms  
15                  of what hasn't been done and what is planned to be done  
16                  in relation to the Forest Production Policy  
17                  Implementation Schedule itself.

18                  So I think your concern will be  
19                  addressed, sir. If it is not by the end of the panel,  
20                  I am sure we can anticipate lots of questions from you.

21                  THE CHAIRMAN: Okay. Why don't we  
22                  proceed with the evidence.

23                  Is anybody having difficulty hearing? I  
24                  know there is problems when something goes by right  
25                  outside the window, but if it gets to be a problem we

1 might shut the windows behind us, but I think it will  
2 cut down on the circulation of air considerably.

3 MR. FREIDIN: A. Mr. Cary, could you  
4 please outline for the Board the evidence that you will  
5 be giving regarding the Forest Policy?

6 MR. CARY: A. Yes. My evidence is going  
7 to be divided into three parts. Firstly, I will be  
8 tracing the development of the Forest Production Policy  
9 Options Document that's now Exhibit 136, which gave  
10 rise to the 1972 Forest Production Policy Statement for  
11 Ontario.

12 I will be looking at some of the factors  
13 that were used in the development of that policy, some  
14 of the assumptions. We will also be looking at how we  
15 implemented that policy, what the process was for  
16 implementation and how we scheduled it.

17 The second part of the evidence will deal  
18 with the progress that we have made. Mr. Freidin has  
19 alluded to the progress that we made since 1972 in  
20 implementing that policy and I will do it by comparing  
21 what actually happened in the field to what we plan to  
22 do.

23 Not only will I track that, but I will  
24 comment about the implications of the results. So I  
25 will be assessing some of those results.



1 Q. When you talk about results, you are  
2 talking about results in terms of what activities were  
3 actually carried out that were planned?

4 A. That's correct.

5 Q. Not the results of the activities but  
6 the results of what was planned?

7 A. That's correct.

8 Q. Thank you.

9 A. And, lastly, I will be talking about  
10 the development of proposals, the review of the  
11 assumptions, examining the old policy with a view to  
12 preparing a set of options or strategies for a new  
13 timber production policy.

14 We will be using, as Mr. Freidin has  
15 said, some different approaches and some different  
16 ways, now 18 years later.

17 Q. Can you just in a very brief way  
18 advise why the Ministry has decided to in fact  
19 undertake this review at this particular time?

20 A. You will see from my evidence that  
21 there are many assumptions that are now outdated. Many  
22 assumptions that are perhaps, as we look back with the  
23 benefit of hindsight, oversimplistic. We feel that we  
24 should be doing this more regularly and we want to do  
25 it now.

1                   Q. When you say the Ministry believes  
2                   that you should do it more regularly, what do you refer  
3                   to?

4                   A. The review and monitoring of a policy  
5                   such as this.

6                   Q. What were the purposes of doing these  
7                   more frequent reviews or more regular reviews?

8                   A. Making sure that the information that  
9                   we use to develop the new technology, the new  
10                  treatments have an effect on and update the  
11                  decision-making process as we go through.

12                  Q. Has the Ministry put its mind to the  
13                  time period at which these regular reviews are to be  
14                  made?

15                  A. We believe that five years might be a  
16                  good time frame.

17                  Q. Before you describe the development  
18                  of the Forest Production Policy, Mr. Cary, I understand  
19                  that you believe that it would be well advised -- that  
20                  we would be well advised that you define certain terms  
21                  or phrases that will be used in your evidence?

22                  A. Yes.

23                  Q. Could you just advise the Board what  
24                  those terms are and why you believe it will be useful  
25                  to define those at the outset of your evidence?

1                   A. I will be using terms that are  
2                   reflected in the Forest Production Policy Options  
3                   Document and in the Forest Production Policy and in the  
4                   Implementation Schedule, and I would like the Board to  
5                   be perfectly clear about what we are talking about when  
6                   we talk about regeneration, when we talk about  
7                   regeneration treatments, what we mean when we use the  
8                   phrase natural regeneration, artificial regeneration,  
9                   what we mean when we talk about silvicultural  
10                  activities as opposed to regeneration activities, and I  
11                  would like to also explain other activities such as  
12                  tending, site preparation, tree improvement and...

13                 Q. And I understand -- well, Mr. Cary,  
14                  do these terms that you are going to define for the  
15                  purposes of your evidence mean the same thing whenever  
16                  they are used by the Ministry of Natural Resources or  
17                  foresters?

18                 A. No, they don't. That is part of  
19                  the -- part of why I would like to clarify this.

20                 The Implementation Schedule, use of some  
21                  of these terms may not be exactly coincident with the  
22                  traditional definition of these terms which might be  
23                  found, for example, in the timber management planning  
24                  glossary.

25                 So I just want to make absolutely clear

1 that when we use these terms the Board knows what we  
2 mean.

3 MR. FREIDIN: And I can assure you, Mr.  
4 Chairman, that all of the witnesses from here on in  
5 will be and have been instructed to do their best at  
6 making sure when they use some of these phrase they are  
7 particular or very clear what they mean by them, when  
8 one of them uses these terms.

9 Q. So, Mr. Cary, could you then perhaps  
10 deal with those particular matters and explain them to  
11 the Board.

12 MR. CARY: A. Yes. I would like to, Mr.  
13 Chairman, go to an overhead and perhaps it would be  
14 clearer that way.

15 THE CHAIRMAN: Very well, please do.

16 MR. FREIDIN: Q. Now, Mr. Cary, before  
17 you begin, I understand you have hard copies of those.

18 MR. CARY: A. Yes, and you put them on  
19 the desk.

20 ---Discussion off the record

21 MR. FREIDIN: Now, Mr. Chairman, I would  
22 like to provide to you, and perhaps we should mark as  
23 the next exhibit, a document entitled Silvicultural  
24 Definitions.

25 THE CHAIRMAN: Exhibit 137.



1 MR. FREIDIN: What exhibit number was  
2 that, Mr. Chairman?

3 THE CHAIRMAN: Exhibit 137.

4 ---EXHIBIT NO. 137: Document entitled: Silvicultural  
5 Definitions.

6 MR. FREIDIN: Q. Okay, Mr. Cary, perhaps  
7 you would just like to proceed.

8 MR. CARY: A. Thank you. I would like  
9 to introduce you to some of these terms as we use them,  
10 as I said, when we talk about the Forest Production  
11 Policy in the Implementation Schedule.

12 Firstly, you will find that regeneration  
13 is defined in the glossary of the TPM and it is  
14 divided into artificial regeneration and natural  
15 regeneration.

16 Natural regeneration occurs either  
17 through vegetative means which is suckering, coppicing,  
18 or through the distribution of seed, unassisted by man,  
19 occurring just by nature.

20 Artificial regeneration...

21 Q. Excuse me. Just before you continue,  
22 could you explain what you mean by suckering and  
23 coppicing.

24 A. I am sorry, yes, I should. Certain  
25 species of trees sucker, which means they put out

1 growth from roots once there has been a disturbance in  
2 the stands. These roots then grow and become trees.  
3 It is a vegetative process rather than one -- rather  
4 than the tree being produced through seed, coppicing or  
5 shoots coming up from the stump of a tree. Again,  
6 vegetatively without the production of seed.

7 The second method of natural regeneration  
8 is through the dispersion of seed.

9 Artificial regeneration is when man  
10 assists or conducts that activity and planting and  
11 seeding are components of artificial regeneration. The  
12 bringing of a tree seedling to the site, the bringing  
13 of a seed to the site that you wish to regenerate.

14 I would like now to just make sure that  
15 we separate and make the distinction between  
16 regeneration, artificial and natural, and silvicultural  
17 activities.

18 Silvicultural activities span a far  
19 greater range. Regeneration is one part of the  
20 silvicultural activities. As you see, silvicultural  
21 activities include harvest, regeneration and many other  
22 activities. So when we talk about silviculture we are  
23 talking much more than planting trees and bringing seed  
24 to the site.

25 I would like to go through very briefly

1 and quickly explain the meaning of these terms we use.  
2 I should remind the Board that the details and the  
3 precise explanation of these activities will be dealt  
4 with in subsequent panels.

5 For example, the panel on renewal will be  
6 dealing in great detail with plants and seeding, both  
7 natural and artificial regeneration. So you will find  
8 very detailed explanations of these things in  
9 subsequent panels.

10 Harvest, that is a silvicultural  
11 activity. Whether the tree crop is taken at one time  
12 or over a series -- in a series of cuts - you will be  
13 hearing about the details later in a later panel - but  
14 harvest is a silvicultural activity.

15 Planting seedlings is a silviculture  
16 activity. We can plant bare root seedlings, which are  
17 grown in nursery beds, lifted out of the grounds after  
18 two or three years, the soil is shaken off the  
19 seedlings and the seedling is then bundled and stored  
20 and transported to the site.

21 We can grow tree seedlings in containers.  
22 We grow them in green houses, we grow them in one year,  
23 and the root of the seedling is contained in soil and a  
24 container - they may vary in size, they may vary in  
25 material plastic, styrofoam.

1                   Seeding, that is putting seed either from  
2                   the air or from the ground on an area. Modified  
3                   harvest cutting is a silvicultural activity. That is  
4                   where we plan and design a pattern of cut to enhance  
5                   the process of natural regeneration. It does not  
6                   involve bringing a plant or a seed to the site.

7                   We can cut in various patterns. We can  
8                   strip cut, we can block cut, we could leave individual  
9                   seed trees or leave groups of seed trees. We could  
10                  clear cut for certain species, certain dimensions, to  
11                  enhance natural suckering, vegetative propagation,  
12                  vegetative production, release of a container of maple  
13                  seeds, for example.

14                  Q. Just before you go on, perhaps you  
15                  just - again keeping in mind that these matters will be  
16                  dealt with in greater detail in other panels - if you  
17                  could describe what is involved in strip cutting and  
18                  block cutting as you have just referred to, and how  
19                  that has an effect, as you would say, enhances the  
20                  process of natural regeneration?

21                  A. Let's take the species black spruce  
22                  for example. We may choose to strip cut black spruce.  
23                  The layout then becomes the key to assist natural  
24                  seeding.

25                  We may cut in strips 200, 300, 400, 500



1 feet wide and then, depending on our alignment,  
2 depending on the species, natural seeding would take  
3 place from the residual uncut stands.

4 You may do that in blocks, four or five  
5 acre blocks. We may use chevron patterns, we may use  
6 all sorts of patterns. And so in this way seed is --  
7 the seed then falls on the cut strip and we get a new  
8 crop regeneration through natural means.

9 Shelterwood cutting is another method we  
10 use. Over time we cut strips in a stand and allow that  
11 cut strip to regenerate through natural means. When it  
12 is regenerated we come back and we cut a strip that was  
13 left at that first point in time.

14 Scarification, that is a silvicultural  
15 Ontario term. Scarification, as we define it, is the  
16 scratching and disturbance of the forest floor after a  
17 harvest or after some depletion. It could be the  
18 scattering of cones during that process. The cones  
19 remain on the site from the branches that are on the  
20 tops and that mixing of the slash, that disturbing of  
21 the forest floor exposes a seed bed.

22 The cones are strewn around, they open  
23 when they are exposed, and heat opens them, the seeds  
24 fall out of the cones and we have a naturally  
25 reproducing stand.

1                   This should be compared, I think, to site  
2     preparation. We may use the same equipment in site  
3     preparation but the activity is different. Site  
4     preparation always precedes an artificial regeneration  
5     treatment by definition.

6                   Scarification then is an end in itself.  
7     The natural processes take over. Site preparation is  
8     where we plant or seed. So we may use scarifying  
9     equipment but we come along afterwards, after that  
10    process and plant or seed, tending to improve the  
11    growth of the forest crop.

12                  We can do it at many stages during the  
13    development of that forest crop, not only early but we  
14    can do it later. A variety of ways, whether it is  
15    coping with competing vegetation or pruning trees that  
16    we want to use for saw log production.

17                  Protection, another silvicultural  
18    activity, protection from disease, protection from  
19    insects. The tree improvement - and I believe the  
20    Board visited the Goodie Lake tree improvement area on  
21    its visit. Tree improvement is the process where we  
22    control and improve the percentage of the seeds in our  
23    artificial regeneration program.

24                  Stock production, I have mentioned, it is  
25    a silvicultural activity, production of either bare

1 root or container stock. When we talk about these  
2 activities and the processes we have to separate the  
3 process from the activity because when we talk about  
4 them in the Forest Production Policy and the  
5 Implementation Schedule we have to differentiate  
6 between process and activity.

7 The Forest Production Policy talks about  
8 regeneration treatments on an area. It talks -- and  
9 these could be artificial regeneration, but in the  
10 Implementation Schedule and Forest Production Policy it  
11 includes modified harvest cutting as well. So when I  
12 show you graphs or data about regeneration, I am  
13 talking about regeneration brought about through  
14 artificial means and through natural processes, but the  
15 difference is -- not the difference, but the factor  
16 that we have to consider is we spend money, Forest  
17 Production Policy money on these activities.

18 The modified harvest cutting activities,  
19 the scarification activities, natural process but the  
20 the planning and the execution of this form of  
21 regeneration must be included because we spend money on  
22 it. So when we talk about regeneration treatments we  
23 are talking about artificial and natural processes.

24 That is why these crosses indicate where  
25 artificial is in the Implementation Schedule, these two

1 crosses you will see are between artificial and natural  
2 regeneration policies and really we count these two  
3 activities as part of our manual record. So I just  
4 want to make it perfectly plain that the processes must  
5 be separated from the activity.

6 Q. Now, looking at that middle column  
7 and the x's that you have, the four x's, if the heading  
8 was artificial regeneration treatments, would it still  
9 be accurate?

10 A. Yes.

11 Q. So that planting under the Forest  
12 Production Policy Implementation Schedule is an  
13 artificial regeneration treatment?

14 A. It is a regeneration treatment.

15 Q. And in your evidence when you use the  
16 word regeneration treatment, what activities are  
17 included?

18 A. Planting, seeding, modified harvest  
19 cutting and scarification.

20 Q. And, therefore, if you were doing a  
21 report for FPP purposes and identifying a stand which  
22 grew on an area which received a regeneration  
23 treatment, would you refer to that as a site which had  
24 been regenerated artificially?

25 A. Yes.



1 Q. And just one last question going back  
2 to your evidence about scarification. In your evidence  
3 to describe that, you described the situation where you  
4 would disturb the forest floor and perhaps disturb or  
5 move cones which were on the ground around.

6 A. Yes.

7 Q. Is scarification done in order to  
8 facilitate or prepare a seed bed for seeds from sources  
9 other than the seeds which are distributed during the  
10 harvest?

11 A. Scarification, as I have defined it  
12 here, isn't done for that purpose. We use scarifying  
13 machinery to carry out this particular activity and  
14 site preparation. The process of scarification is  
15 scratching the soil.

16 So we use scarifying machinery in both  
17 this case and this case. The difference is again, this  
18 is followed by an artificial regeneration treatment,  
19 this is a treatment in itself.

20 Q. What is the seed source after you  
21 have done scarification?

22 A. It may come from the cones that are  
23 left on that site or it may come from trees that are on  
24 the margin of this site and they will blow in across  
25 the depleted area.

1 Q. Okay.

2 MR. MARTEL: Why do you use the different  
3 terminology then? If scarification is to really get  
4 seed down, and site preparation is the same process  
5 except you go out and plant seed, is there ever an  
6 occasion where you have had to go back and put seed on  
7 the area that you have scarified because it didn't take  
8 from the natural seeds that were there?

9 MR. CARY: There may have been occasions  
10 yes that we have had to do that.

11 MR. MARTEL: You confuse the whole  
12 process by all those definitions.

13 MR. CARY: We are inconsistent, sir, I  
14 agree and we are going to be looking at these terms and  
15 trying to make them more intelligible.

16 Mr. Armson I believe will be talking  
17 about this area later on in our panel's evidence.

18 MR. FREIDIN: I am sure it is something  
19 that the Ministry would not be too upset about, the  
20 fact that the Board would impose a condition for  
21 approval that the terms and definitions be clarified  
22 and consistent.

23 THE CHAIRMAN: Apart from the Ministry  
24 not being consistent, what about the industry? By that  
25 I mean other forest managers throughout North America

1 and the rest of the world, do they use these terms in  
2 any kind of consistent fashion?

3 MR. CARY: As the glossary of the TMPM  
4 points out, there are many jurisdictions that use  
5 different terminology. In some cases Ontario uses  
6 pretty traditional omni-jurisdictional terminology, in  
7 some cases it doesn't.

8 But, yes, terminology varies across the  
9 world, forest terminology.

10 MR. FREIDIN: Q. Mr. Cary, what is the  
11 Forest Production Policy?

12 MR. CARY: A. I would like to refer the  
13 Board to paragraph 7 on page 22 of the evidence. The  
14 Forest Production Policy that was established by  
15 government in 1972 stated that a new forest - I will  
16 explain that term later - would be in place that would  
17 provide a volume target of 9.1-million cunits of fiber  
18 for industrial use by the year 2020 and then from then  
19 on.

20 Q. And can you advise how that volume is  
21 described; is it gross total volume, gross merchantable  
22 volume or net merchantable volume?

23 A. The 9.1-million cunits is net  
24 merchantable volume or volume sitting in the mill yard  
25 ready for industrial use.

1 Q. Being in the mill yard ready for  
2 industrial use defines net merchantable?

3 A. That is one of the definitions of net  
4 merchantable, yes.

5 Q. For what geographical area of the  
6 province was this wood supply to come from?

7 A. It was to come from Crown land in the  
8 province plus those areas that the Ministry managed  
9 under the Woodlands Improvement Act and those areas  
10 that the Ministry managed called agreement forests and  
11 they are agreements with municipalities or conservation  
12 authority, the larger landholders.

13 So from the Woodlands Improvement Act  
14 areas which are private land, from the agreement  
15 forests which are private land, and provincial Crown  
16 lands.

17 MR. MARTEL: Can I ask a question, to go  
18 back to the 9.1-million. When you took that figure  
19 into consideration, what does that translate into in  
20 the amount of wood that would be cut in the forest?  
21 Because there is a difference in what you are going to  
22 have in the yard and how much you are going to have  
23 cut.

24 I guess the figure I am looking for is:  
25 Did the Ministry calculate how much it was going to --



1 needed to be cut taking into consideration the amount  
2 that would be left in the woods and not utilized in  
3 arriving at the volume that it required? In other  
4 words, how much was going to be left left in the bush?

5 MR. CARY: I believe they did do that  
6 calculation, sir, but I have no idea about the  
7 percentage and if Dr. Osborn would like to comment on  
8 that, I would be delighted.

9 DR. OSBORN: I believe Mr. Martel they  
10 worked out that that was the figure they required in  
11 the mill yard and in turn they work backwards to how  
12 much silvicultural activity was needed to generate a  
13 forest of that size.

14 So the question wasn't how much would had  
15 there to be gross total in the forest per se, but how  
16 much silvicultural activity they needed to do to ensure  
17 that that volume would be out there.

18 But Mr. Cary later will speak to the sort  
19 of estimates required on that silvicultural activity.  
20 But a a very simple answer to your question would be to  
21 multiply the 9.1 by that 1.4, 1.3. So it is  
22 approximately 12 million cunits gross total volume  
23 would translate to something like 9.1 net merchantable.

24 Very, very crude.

25 MR. MARTEL: So about a third more?

1 DR. OSBORN: But be very careful. I  
2 don't wish to translate 9.1 net merchantable in the  
3 mill yard to approximately 12 gross total volume  
4 standing in the bush. Tops, stock, cull, et cetera.  
5 Very, very crude number.

6 MR. FREIDIN: Q. And the Woodland  
7 Improvement Act agreements, privately owned land,  
8 agreements entered into with the Crown.

9 MR. CARY: A. That's correct.

10 Q. Basically to manage that area as  
11 commercial stand of some sort?

12 A. Yes, the objective of the programs  
13 are to -- both agreement forests and the WIA program is  
14 to aforest abandoned farmland and to produce commercial  
15 stands for industrial use.

16 Q. Is the latter always an objective of  
17 one of these agreements?

18 A. Not always but in most cases.

19 Q. Okay. Just to be clear, these  
20 agreements do not refer or include forest management  
21 agreements; do they?

22 A. Absolutely. Forest management  
23 agreements are on Crown land.

24 Q. How does the geographical area then  
25 which was the subject matter of the Forest Production

1 Policy area from which these new forests are going to  
2 come from, how did that compare or does compare to the  
3 area of the undertaking?

4 A. It is larger than the area of the  
5 undertaking. The undertaking, as we know, applies to  
6 Crown land and the WIA and agreement forests in most  
7 cases lie outside management units, though they are  
8 included in the area of the undertaking and are on  
9 private land.

10 Q. And is there Crown land outside the  
11 area of the undertaking which is used for commercial  
12 tree production where harvest goes on?

13 A. There may be, but I am not aware of  
14 the size. It is a very small area.

15 Q. thank you. Could you advise, Mr.  
16 Cary, what the Forest Production Policy Implementation  
17 Schedule is?

18 A. Yes. I would like to refer the Board  
19 to paragraph 8 and the Forest Production Implementation  
20 Schedule was prepared by the Ministry after the  
21 government decision was made and it is set out on an  
22 annual basis an estimate - and I would like to stress  
23 that word - our plan for how we would implement that  
24 government decision and it included silvicultural work  
25 that was to be done in order for that forest to be

1 placed on the ground by 2020.

2 Q. Could you go back, Mr. Cary, to the  
3 Forest Production Policy and provide a brief indication  
4 as to the history which led to the establishment of  
5 that policy?

6 A. Yes. As forestry moved into the  
7 boreal forest region in the 60s, and then expanded in  
8 the mid-60s, the professionals of the day realized that  
9 as the cut was expanding the silvicultural activities  
10 were not keeping pace with that.

11 During the late 60s, the projects were  
12 done on an annual basis. We applied for funding  
13 annually and got it annually. It quickly became  
14 apparent that the program wasn't doing as well as it  
15 should be doing and so the professionals at the time  
16 realized there was a need to set a strategy for a  
17 program objective a long-term program objective. That  
18 was what was missing. That program objective should  
19 set a level for future wood supply.

20 The problem with funding became very  
21 apparent and I can give you an example of how critical  
22 this is. Silvicultural activities span a number of  
23 years and span a number of activities. Funding on an  
24 annual basis which may be irregular causes real  
25 problems in program delivery.



1                   For example, if you have money to site  
2                   prepare one year and the subsequent year you do not get  
3                   the money to plan the trees on that site-prepared area,  
4                   obviously you are in a problem. And we can go over  
5                   much -- we can use this analogy over a much longer time  
6                   frame.

7                   In order to grow stock at a nursery, you  
8                   have to collect cones from trees, you have to extract  
9                   that seed in order that you can sow it at a nursery.  
10                  So you have to go back in time about five years in  
11                  order to plan your program properly. So five years  
12                  before you actually stick a tree in the ground you have  
13                  got to do some thinking and planning and then you have  
14                  got to make sure that your program proceeds and does  
15                  the right things at the right time over the years. So  
16                  it is a continuum of activities.

17                  Five years before we plant that seedling  
18                  we have got to collect the seed. We have got to  
19                  extract it and then store it. It has got to get to the  
20                  nurseries and they have to put that seed in the nursery  
21                  beds. It then takes three years to produce a seedling  
22                  which we have to site prepare for, then plant. We then  
23                  have to worry about tending those treated areas.

24                  So it is very important to realize that a  
25                  continuity of funding for that particular type of

1 program is absolutely essential. That tending by the  
2 way may be done over ten years after plantation  
3 establishment and there might be some protection work  
4 you have to do in order to safeguard your investment.

5 So the act of planting a tree isn't the  
6 only thing we do.

7 Q. And the reference to continuity of  
8 funding is referred to in paragraph 2 of the witness  
9 statement; that is correct?

10 A. That's correct.

11 Q. That particular paragraph also  
12 indicates, Mr. Cary, that the staff of the forest  
13 resource program also identified a need to quantify the  
14 forest land base to be used for timber production.

15 Are you saying that the Ministry didn't  
16 know at that time that land base upon which timber  
17 management could occur?

18 A. The 1963 report on forest inventory  
19 detailed our productive forest land base. We knew how  
20 much was out there. The problem was in determining  
21 what part of that productive land base we were to  
22 utilize: Was it all, was it much less than all, half.

23 So we needed to know, we needed to match  
24 obviously that to our overall long-term wood supply  
25 objective. So we needed to quantify that land base

1       that was to be used for timber production within that  
2       productive forest base.

3                   Q.   In the options document that I  
4       believe was marked as Exhibit 136; is that the right  
5       reference?

6                   A.   Yes.

7                   Q.   All right.  We will turn to that  
8       later, but can you advise at this point in time whether  
9       that document has any identification of the area  
10      believed at that particular time back in the early 70s  
11      which would be required to carry out timber management?

12                  A.   It has.

13                  Q.   And does that document indicate the  
14      geographical location of where that area is or was at  
15      that time?

16                  A.   No, it doesn't.  It doesn't indicate  
17      exact geography.  It indicates production forest,  
18      productive forest, I am sorry.

19                  Q.   The last item in paragraph 2  
20      indicates that there was a need to identify to improve  
21      the efficiency of the program delivery.  Can you advise  
22      what you mean by that?

23                  A.   Yes.  In order to effectively deliver  
24      a program one has to know how many people you need,  
25      what facilities you need, what equipment is needed,

1       what technology is needed.

2                       And unless the field staff can plan for  
3       that on a long-term basis, the program delivery isn't  
4       as effective as it should be. So infrastructure of  
5       both buildings, technology, expertise, amount of people  
6       needed to deliver the program.

7                       Unless one sets a long-term objective it  
8       is very difficult to devise how you are going to  
9       deliver any program.

10                      THE CHAIRMAN: Mr. Freidin, let us pick a  
11       convenient place to stop for a break.

12                      MR. FREIDIN: This is a convenient time.

13                      THE CHAIRMAN: Very well, we will break  
14       for 20 minutes.

15       ---Recess at 2:35 p.m.

16       ---Upon resuming at 3:05 p.m.

17                      THE CHAIRMAN: Thank you, ladies and  
18       gentlemen. Please be seated.

19                      MR. FREIDIN: Q. In order to develop a  
20       long-term policy of the kind you describe, the Forest  
21       Production Policy, what are the factors that should be  
22       considered.

23                      MR. CARY: A. I would like to draw the  
24       Board's attention to paragraph 4 of the statement of  
25       evidence starting on page 20 and I would like, Mr.



1 Chairman, with your permission, to go to an overhead  
2 and work from an overhead and that overhead is an exact  
3 listing of the items A through H on page 21, in order  
4 to illustrate some of the factors that I wish to  
5 discuss.

6 THE CHAIRMAN: All right.

7 MR. CARY: Thank you.

8 I would like to deal with those factors  
9 one by one, but at the outset to say that they are all  
10 inter-related. You have -- the change in one factor  
11 will affect another factor. So they shouldn't be taken  
12 separately, they are all inter-related in a discussion  
13 of this sort.

14 Some of these factors were used in the  
15 1972 Forest Production Policy option exercise. Those  
16 factors will be used and are used in the development of  
17 the development of the scenarios, the modeling  
18 scenarios that will be part of this panel's evidence  
19 and they will be considered in the development of a new  
20 timber production policy.

21 The first thing you should consider - and  
22 Dr. Osborn has referred to this in his evidence in  
23 previous panels - the amount of forest land and its  
24 associated growing stock. If you don't know what piece  
25 of geography you practicing on, it is extremely

1       difficult to make a long-term forecast. That piece of  
2       geography, you have to know whether it is just a  
3       management unit or a collection of management units in  
4       a district, it could be a region, it could be the area  
5       of the undertaking, it could be the province. You must  
6       know the area, the amount of forest land that you are  
7       considering and what's growing on it.

8               The second factor is you must know what  
9       present demand is and have a very good estimate or as  
10      best you can of what the future demand for wood will  
11      be. So that's another key factor. It is written (C)

12             One should be aware of the species of  
13      trees that will be used by industry, whether those  
14      species be conifer or hardwood. It is important to  
15      know that. It is important to know one of the  
16      scenarios gives information on just this. There may be  
17      a substitution opportunity, conifer for hardwood, so it  
18      is important to know what species of trees will be  
19      utilized.

20             It is also important to know how  
21      efficiently those trees will be utilized. How  
22      efficiently those trees will be utilized in the forest,  
23      what part of that tree makes it to the mill yard and  
24      into the mill, and also what the utilization in the  
25      processing plant is. We call it mill recovery. So it

1 is important to know those things too if you are going  
2 to forecast.

3 You are going to incur losses to your land  
4 base which is available for timber production over the  
5 long term, whether it be the removal for an exclusive  
6 use such as a park, a hydro corridor, an aggregate  
7 deposit, there are going to be losses to your land  
8 base.

9 And the activities of forestry also  
10 reduce the land that's available for practising timber  
11 production. Roads and landings perhaps going to be 5  
12 per cent of the land base in an area.

13 Q. When you refer to landings, briefly  
14 what are they?

15 A. Landings are areas in the forest  
16 where wood is gathered prior to transportation to a  
17 processing plant. Much more will be heard about  
18 landings in the panel on harvest.

19 Losses of growing stock. As you have  
20 heard before in previous evidence, natural causes such  
21 as fire deplete the growing stock, so does the  
22 prediction of insects, disease losses and, of course,  
23 there is natural mortality. As Mr. Armson has pointed  
24 out, the forest is a dynamic being.

25 MR. FREIDIN: Mr. Chairman, I should

1       advise you that we really didn't have an (E) and  
2       decided to keep it a secret, it was just a mistake in  
3       the typing order.

4                   Q.   In relation to those particular  
5       losses of growing stock, Mr. Cary, can you advise  
6       whether the prediction in relation to those losses is  
7       difficult?

8                   A.   Yes, it is.

9                   Q.   And I understand that estimates of  
10      those particular types of losses will be dealt with by  
11      Dr. Osborn and Mr. Gordon.

12                  A.   And some of the difficulties that are  
13      involved in predicting that sort of loss will be  
14      discussed.

15                  Q.   In Panel No. 3, Dr. Osborn in  
16      describing the calculation of the MAD, the maximum  
17      allowable depletion, said that the potential losses due  
18      to natural causes such as the ones that you have listed  
19      here were not considered when those calculations were  
20      made at the beginning of the planned period.

21                  Do you recall that evidence?

22                  A.   I cannot say I was here for the  
23      evidence.

24                  Q.   All right. Do you agree with the  
25      statement?



1 A. Yes, I do.

2 Q. In this particular situation, are you  
3 considering the losses from these particular causes up  
4 front sort of at the beginning of the calculation?

5 A. We are doing some long-term  
6 forecasting of what will happen in the future. You are  
7 looking to whatever future you wish to - whether it be  
8 five years, ten years 50 years, a hundred years. So  
9 you are forecasting a long time in advance.

10 Q. And does that explain the difference  
11 in the approach?

12 A. Yes. Another factor that should be  
13 considered is the intensity of silvicultural efforts,  
14 anticipating the area to be managed and there are a  
15 couple of things here.

16 Firstly, you have to make a decision  
17 whether you are going to treat that area under  
18 consideration with the same regeneration treatments or  
19 are you going to use different ones. We know very well  
20 that there are different sites out there that should  
21 require different treatments.

22 So again depending on your piece of  
23 geography you can get quite exact about how much effort  
24 you are prepared to expend, how many dollars, what sort  
25 of treatments. One should be able to forecast that,

1 one should have an estimate of the level of  
2 silvicultural effort you are going to apply to that  
3 area to be managed. Obviously on a provincial or an  
4 undertaking basis you are going to make estimates of  
5 that. This, we believe, will help us to spend our  
6 resources wisely and make sure we get good  
7 silvicultural return.

8 And lastly, one obviously must know the  
9 volume of wood which will be obtained from the forest.  
10 It is going to be less than the growing stock, so one  
11 has to have an idea of what volume will be available to  
12 industry from the forest.

13 Q. All right. And why do you say it  
14 would be less than the growing stock?

15 A. Well, there is reductions because of  
16 utilization from gross total to net merchantable, for  
17 example. We mentioned that earlier.

18 Q. When you are making assumptions about  
19 the future volumes, do you consider the existing forest  
20 or only the forest which will be created over time?

21 A. We have got to consider both the  
22 existing forest and that is today's forest and  
23 tomorrow's forest and that is a really key item that I  
24 would like to discuss.

25 Q. And is that particular matter then

1 discussed in the next paragraph, Mr. Cary, paragraph 5?

2 A. Yes, it is. In paragraph 5 the terms  
3 new forest and old forest are discussed and I guess  
4 very simply, when you are making a forecast you have to  
5 decide what your time zero is and whatever date --  
6 whatever day is time zero, the forest that exists at  
7 that time can be called the old forest or today's  
8 forest.

9 The forest of the future, which is  
10 tomorrow, can be called the new forest and that point  
11 in time is very important when one is working out  
12 forecast, long-term forecasts of supply and demand. So  
13 it is a convenient division. It is used by foresters  
14 for managerial purposes and, obviously, the forests  
15 grow and they continue to grow on a daily basis, one  
16 has to make a decision as to where you start your  
17 forecast from.

18 For the purposes of Forest Production  
19 Policy, which is part of this discussion, the old  
20 forest is defined as the forests of Ontario as they  
21 existed in 1972. Each bit of forest that came on  
22 stream after that that was regenerated by any means  
23 since that time we will term the new forest. Whether  
24 it was regenerated naturally or artificially it is new  
25 forest.

1 Q. Now, Mr. Cary, can you turn to  
2 Exhibit No. 136 which is the FPP Option Document.

3 A. Yes.

4 Q. Can you describe that document for  
5 the Board?

6 A. This document was developed and  
7 formed the basis for government establishing a Forest  
8 Production Policy for Ontario. This is the document  
9 that Cabinet considered.

10 Q. It was the document which was given  
11 to Cabinet?

12 A. That's correct.

13 Q. I take it you weren't in the room to  
14 know exactly what they did or didn't consider?

15 A. No, I was not in the room.

16 Q. And the policy was formulated then  
17 some time after this document was given to Cabinet?

18 A. Yes.

19 Q. And in making a policy such as you  
20 have described, the Forest Production Policy, was the  
21 government doing anything new or unique in your view?

22 A. Yes, it was. It was the first policy  
23 of its kind in Canada and I don't know about the other  
24 jurisdictions, but it led the way in Canada. It has  
25 been our hallmark policy for the last 16 years. It has



1 served us very well.

2 It is not a perfect document, in  
3 hindsight we have had the opportunity to review and  
4 examine it and some of the assumptions upon which the  
5 policy options were based now, as I have said before  
6 this afternoon, were overly simplistic and they needed  
7 updating and that is the business of the current review  
8 for proposals for a new timber production policy.

9 Q. Could you provide a more specific  
10 overview of the document itself?

11 A. Yes. Perhaps it would be easier for  
12 the Board, Mr. Chairman, to follow my description of  
13 the document, a very brief description, by looking at  
14 the Table of Contents on page 2 of Document No. -- of  
15 Exhibit No. 136. I would like very briefly perhaps to  
16 capsule what is in the document.

17 The first main section is one on  
18 environmental forestry. It contains a treatise on the  
19 effects of forestry on other users and the environment  
20 and I think when one reads it one has to consider the  
21 time at which it was written. It was written in 1970.

22 At that time there was no parks policy.  
23 Integrated resource management was a concept, it  
24 certainly wasn't formalized, there were no areas of  
25 concerned planning processes, there was no EA, there

1 was no District Land Use Planning Guidelines, there was  
2 no Strategic Land Use Planning Guidelines. So one has  
3 to read it in that context.

4 Following that there is a section on  
5 industrial forestry that will be updated by Panel 5 who  
6 will deal with essentially the same array of items that  
7 you see listed there. Panel 5 will have a look at  
8 demand and the short-term economic prospects,  
9 competitiveness and then come up with a, together with  
10 this panel, comment on wood supply.

11 The final section or the final part of  
12 that section on industrial forestry details the Forest  
13 Production Policy options that were the culmination of  
14 this particular document.

15 Q. Mr. Cary, in relation to  
16 environmental forestry, although the matters that you  
17 described such as parks policy, areas of concerned  
18 planning weren't in effect at the time this document  
19 was written, does the document make any conclusions  
20 regarding environmental forestry and, in particular,  
21 effects or potential effects of forestry on other uses  
22 and values?

23 A. Yes, it does. It shows concern for  
24 them and it, in fact, says we should be very aware of  
25 the impacts and the effects of forestry on the

1 environment.

2 Q. And is that discussion or are those  
3 conclusions found on pages 14 and 15 of the document?

4 A. Yes, they are.

5 Q. Perhaps you could refer to that  
6 particular section and review it with the Board and  
7 advise whether the Ministry has developed any policies  
8 or taken any significant actions since that document  
9 which addresses the concerns noted therein?

10 A. Yes. And perhaps without reading the  
11 whole conclusion section, on page 15, the second  
12 paragraph of the concluding section, it states:

13 "There is little doubt that future forest  
14 management will be devoted to the multi-  
15 purpose use of forest resources and will  
16 require new forest policies based on  
17 expanded and integrated analyses  
18 affecting both the consumptive and  
19 non-consumptive values involved."

20 During the last 16 years I believe that  
21 the Ministry has come a long way and examples of our  
22 new policies which affect how we do business in the  
23 forest is the parks policy, the wildlife policies, the  
24 new timber management planning manual, the  
25 environmental assessment process itself, public

1 participation, our policies on that, Strategic Land Use  
2 Plans, District Land Use Guidelines. So there are many  
3 things that have happened since then.

4 Q. In relation to the options  
5 themselves, the Forest Production Policy options, could  
6 you describe those options which were in fact presented  
7 to Cabinet?

8 A. Yes, I will, Mr. Freidin. I would  
9 like to show the Board an overhead of Table 4 on  
10 page -- sorry.

11 Q. Page 40.

12 A. Page 40. Table 4, page 40 of Exhibit  
13 136 and take the Board through that table.

14 MR. FREIDIN: Mr. Chairman, Mr. Cary has  
15 given me copies of this particular document. It  
16 appears on the overhead exactly as it appears on page  
17 40.

18 Q. Perhaps, Mr. Cary, would it be useful  
19 at all for the Board to have that copy in front of  
20 them; in other words, will you be speaking to it when  
21 you haven't got the slide up?

22 MR. CARY: A. Yes, I might be doing that  
23 because I will be speaking about some of the  
24 assumptions that underline this. So it would be useful  
25 to the Board that...



1 MR. FREIDIN: I don't believe this  
2 document needs to be made an exhibit, but it might help  
3 follow the evidence.

4 THE CHAIRMAN: All right. You can give  
5 us a copy of it, but we will not make it an exhibit  
6 since it appears in its present form in Table 4 on page  
7 40.

8 Well, it appears to be not quite the same  
9 as the table on page 40, you have this extra line on  
10 there.

11 MR. FREIDIN: Oh, you are right.

12 THE CHAIRMAN: So if that is the case, I  
13 think we will have to mark it.

14 MR. FREIDIN: I think you are right.

15 THE CHAIRMAN: Exhibit 138.

16 ---EXHIBIT NO. 138: Table 4, Summary of Policy Options  
17 with overlay showing chosen level.

18 MR. FREIDIN: Q. Okay, Mr. Cary, perhaps  
19 you can move that slide a little bit over to the left  
20 so we get it all on the screen.

21 MR. CARY: A. Before I lead the Board  
22 through this table, I would like to talk about some  
23 assumptions that are behind the development of the  
24 options.

25 Paragraph 9 of the evidence on page 23

1 details the assumptions that I would like to briefly  
2 discuss. The first is about yield and paragraph 9  
3 states two yields, one from natural regeneration -- and  
4 are the results of natural regeneration at rotation age  
5 and the results of yield from regeneration treatments  
6 or artificial regeneration.

7 Those two yields, from natural  
8 regeneration 10 cunits per acre, and from those lands  
9 which received a regeneration treatment 20 cunits per  
10 acre. So those are the assumptions that we use to  
11 translate a volume target to an area target.

12 The second assumption that's used or the  
13 oldest in the document used is 130,000 acres  
14 regenerated naturally each year, 130,000 acres  
15 regenerated each year. So within each one of those  
16 options that you see listed, there is 130,000 acres of  
17 natural regeneration that is common to each option.

18 Q. Mr. Cary, could you advise where the  
19 yields of 10 and 20 cunits per acre came from?

20 A. Yes. Before I tell you where I think  
21 they came from, I would like to say that the yields  
22 were average yields across all site classes, all  
23 species. They were lot averages, averages for poplars  
24 spruce, pine, for example, across all the site classes,  
25 site class X, 1, 2, 3. So quite a broad brush approach

1 to yields, and that was both for natural and for  
2 artificial yields.

3 They came from examination of the normal  
4 yield tables and the premise at the day was that by  
5 expending money and time and implementing regeneration  
6 treatments on areas, you would double the yield. So  
7 from 10 cunits per rotation age you would get 20 cunits  
8 per rotation age.

9 Q. And at that particular time when  
10 those sorts of projections were made, can you advise  
11 whether there was much, if any, information regarding  
12 the yields that one could expect from stands which had  
13 received a regeneration treatment?

14 A. Very little indeed. The document was  
15 written in 1970 and whatever experience was available,  
16 whatever data was available came from some of the red  
17 pine and white pine plantations in southern Ontario.  
18 So we simply didn't have a really good idea about how  
19 the new forest would grow in the area of the  
20 undertaking. So it was the best professional judgment  
21 was used.

22 Q. And in preparing these particular  
23 policy options and, in particular, dealing with the 20  
24 cunits per acre for areas which received a regeneration  
25 treatment, was any distinction made between area A

1 which received a regeneration treatment of say planting  
2 on the one hand and an area B which received a  
3 regeneration treatment of modified harvest Cut on the  
4 other?

5 A. There was no distinction made, across  
6 all regeneration treatments.

7 Q. And could you advise where the  
8 130,000 acres that would regenerate naturally each year  
9 come from?

10 A. The Ministry conducted an assessment  
11 of cut over between 1966 and '69 and as a result of  
12 that assessment they assumed that 130,000 acres of  
13 natural regeneration would occur on cut over lands each  
14 year.

15 Q. And I understand, Mr. Cary,, that the  
16 the calculation of that amount appears on page 65 of  
17 this document?

18 A. That's correct.

19 MR. FREIDIN: Mr. Chairman, we don't  
20 intend to review that particular map.

21 Q. Now, having described those three  
22 assumptions then, Mr. Cary, can you then continue to  
23 describe the options that were presented to Cabinet?

24 MR. CARY: A. Yes. I would like to take  
25 you through a bit of mathematics first. What I would



1 like to do is to take this off for a -- as you see in  
2 front of you, in Table 4 there -- I am sorry, Mr.  
3 Chairman, I would like to put this table back on and  
4 take you through some of the options now, I apologize.

5 What I would like us to do at this  
6 juncture is not consider the column that's headed area  
7 treated acres. If you can leave consideration out of  
8 that, I would like to just take you through the rest of  
9 columns.

10 The development of these options and the  
11 details will be found in Exhibit No. 136, page 56  
12 through to 64. Those pages contain the detail and the  
13 math of these options. The first option that was  
14 presented to Cabinet was for a yield of 1.3-million  
15 cunits and that was a no cost option, it didn't involve  
16 any government expenditure. The 1.3-million cunits  
17 could be derived from natural regeneration.

18 The second option --

19 Q. By the way, that would be -- that  
20 1.3-million would be the estimated harvest of cunits in  
21 the year 2020; is that correct?

22 A. Column 5.

23 Q. In the year 2020?

24 A. That would be -- yes, that's correct,  
25 yes.

1 Q. Thank you.

2 A. The second option was set at a level  
3 that we were funding in 1971. In 1971 the program cost  
4 the government \$8.8-million, Column 4 and that was an  
5 option presented to Cabinet. This is what we are  
6 spending now, and if we flat line that expenditure we  
7 can expect 4-million cunits available by spending  
8 \$8.8-million and that \$8.8-million was split in a  
9 project cost which is the actual cost of the activity  
10 in the field and staff costs.

11 And that 4-million cunits would come  
12 from, as I say, natural regeneration and artificial  
13 regeneration this time.

14 MR. MARTEL: Is that a one shot deal; in  
15 other words, only the one year?

16 MR. CARY: No.

17 MR. MARTEL: Or annually?

18 MR. CARY: It would be the harvest  
19 annually. All these figures, Mr. Martel, are annual.

20 MR. MARTEL: Your costs, though.

21 MR. CARY: Sorry?

22 MR. MARTEL: The costs, the \$8.8-million  
23 each year?

24 MR. CARY: Yes.

25 MR. MARTEL: Okay, thank you.

1 MR. FREIDIN: Q. That would be the cost  
2 of that particular option each year from the year 2020  
3 and onwards?

4 MR. CARY: A. No.

5 Q. No, all right.

6 A. From now, onwards.

7 Q. Now being what time in relation to  
8 this?

9 A. 1972.

10 Q. All right.

11 A. The third option would be to maintain  
12 the cut that was going on at that time. The harvest at  
13 that time was 6.2-million cunits. This option then  
14 said we will maintain that industrial demand at that  
15 level, at today's level and flat line it and we will  
16 have that demand available at the year 2020 onwards,  
17 involving almost twice as much cost because it involved  
18 nearly twice as much as trees.

19 Option 4 that was presented met the  
20 forecast demand, demand by industry at the year 2020.  
21 As I pointed out in the document, there was a section  
22 on demand. The results of their forecast told the  
23 authors of the document that at 2020 the industry would  
24 require 12-million cunits, much increased cost with a  
25 much increased area treated.

1                   The fifth and final option was one that  
2                   involved increased competitiveness and industry  
3                   competing for and getting a greater share of the  
4                   marketplace, 16-million cunits from the year 2020  
5                   onwards.

6                   So those are the five options that were  
7                   presented to Cabinet and I would like to show you now a  
8                   little bit of the math that went behind that and how we  
9                   derived the area treated column for the various  
10                  treatments -- for the various options.

11                  THE CHAIRMAN: Mr. Cary, why was the unit  
12                  cost perfect acre lower in Option 4 as opposed to the  
13                  other three?

14                  MR. CARY: I am not exactly sure. We can  
15                  look at the supporting detail, but there are  
16                  differences in treatments, combinations of treatments  
17                  and I suspect it is that sort of...

18                  THE CHAIRMAN: Okay. Well, I don't think  
19                  it is necessary to go into detail, I just wondered if  
20                  there is a quick answer.

21                  MR. CARY: No, there isn't a quick  
22                  answer.

23                  THE CHAIRMAN: Okay.

24                  MR. CARY: I mentioned the two  
25                  assumptions, the first about yield, the natural



1 regeneration of 10 cunits per acre, and the second  
2 about artificial, or those lands which received a  
3 regeneration treatment of 20 cunits per acre.

4 MR. FREIDIN: Mr. Chairman, I have a copy  
5 of that overhead and perhaps it should be marked as the  
6 next exhibit.

7 THE CHAIRMAN: Very well, Exhibit 139.

8 ---EXHIBIT NO. 139: Copy of overhead relating natural  
9 and artificial to regeneration  
treatments.

10 MR. CARY: The second assumption...

11 MR. FREIDIN: Q. Whoa, whoa, Mr. Cary.

12 MR. CARY: A. I am sorry.

13 Q. Okay.

14 A. The second assumption, I mentioned  
15 this before, 130,000 acres of artificial regeneration  
16 each year. You saw in that first option that you have  
17 it in front of you, if 130,000 acres of 10 cunits per  
18 acre are available each year the yield will be  
19 1.3-billion cunits.

20 If you are given a target for - and we  
21 will take Option 2, for example - of 4-million, an  
22 estimated harvest of 4-million cunits, if you were to  
23 put -- if you were to place the figure 4 here, the  
24 balance of 2.7-million cunits would have to come from  
25 treated acres. That's how the area was derived.

1                   So for each option you could place the  
2                   level there, the balance then would be the acres you  
3                   needed to treat because they would yield 20 cunits per  
4                   acre.

5                   Now -- so, for example, in Option 2, if  
6                   you put 4 there, here (indicating) 2.7 would appear  
7                   there and then if you divide 20 into 2.7 you will come  
8                   up with approximately 136,000 acres. So for that  
9                   option you would be treating 136,000 acres per year.

10                  Inherent in that, of course, is the  
11                  1.3-million cunits that would come back from natural  
12                  regeneration. You could do that for each option if you  
13                  wish.

14                  Q. Now, if you know that the option or  
15                  if the option chosen is 9.1-million cunits per year, do  
16                  you use the same approach, the same mathematics to  
17                  calculate how many acres require a regeneration  
18                  treatment?

19                  A. Yes, and we have mentioned that the  
20                  policy 9.1-million cunits was established by Cabinet,  
21                  then 7.8-million cunits would have to come from  
22                  artificial regeneration treatments and again, by simple  
23                  division that would mean that there was an annual  
24                  treatment level of 390,000 acres.

25                  So that is the math behind the selection

1 or the calculation of the area figure. That's how  
2 volume gets translated into area. And on this table,  
3 Table 4, the option chosen by Cabinet, you will note,  
4 wasn't coincident with any of the options presented to  
5 Cabinet.

6 The Cabinet chose from among them and  
7 that was their decision, 9.1-million cunits was the  
8 level and by simple math we then came up with the  
9 amount we had to treat which is 390,000 acres.

10 Q. Mr. Cary, can you tell me what action  
11 was taken once Cabinet had made that choice?

12 A. The program was then faced with the  
13 task of -- the welcome task of implementing that  
14 decision and to put that level of treatment in context,  
15 that was just more than two and a half times what we  
16 were treating in 1972. So obviously this wasn't going  
17 to happen overnight.

18 It was a major task, a major task that  
19 was then presented to us for action. Increasing one's  
20 program by that size requires a lot of planning and a  
21 lot of thought. What we did was was to construct an  
22 implementation schedule and that implementation  
23 schedule was a schedule that allowed over a 10-year  
24 period for a phasing in of this effort.

25 As I have said, forestry -- the

1 operations in silvicultural activities were in a  
2 continuum, you cannot magically produce another 20 or  
3 30 or 40-million trees. That has to be planned and  
4 phase in.

5 So there was a 10-year period for phasing  
6 in chosen. So the implementation schedule was over 10  
7 years.

8 Q. You will be dealing with that  
9 implementation schedule in more detail, but can you  
10 advise what was the situation intended to be at the end  
11 of that 10 years of implementation?

12 A. The objective of that 10-year  
13 implementation schedule was that the provincial level  
14 of regeneration treatments would be 390,000 acres. So  
15 we were gearing up to 390,000 acres over a 10- year  
16 period.

17 THE CHAIRMAN: But isn't the basis of  
18 nine million, one hundred thousand -- 9.1-million  
19 cunits based on a level of treatment plus natural of  
20 390,000 acres per year for each year up to the year  
21 2020, and if at the end of 10 years you just reach  
22 390,000 are you not going to be short by several  
23 thousand cunits by the year 2020?

24 MR. CARY: That's correct. We were  
25 presented with, I suppose, a task that was pretty



1       daunting then and again, as I say, the gearing up did  
2       take time. We will get into this other subject later.

3               MR. FREIDIN: Q. I understand, Mr. Cary,  
4       that you have got a graphical representation of the  
5       Forest Production Implementation Schedule which relates  
6       to regeneration treatments, Document No. 2?

7               MR. CARY: A. Yes, I do.

8               THE CHAIRMAN: Mr. Cary, why would you  
9       not gear up for much more than the 390,000 so you would  
10      average it out over the period of time? Why would you  
11      just aim for what you should be reaching in the first  
12      year after the ten?

13              MR. CARY: The task of getting to 390, as  
14      I will explain to you later, we didn't meet the demands  
15      of that task. It was felt to be simply not feasible to  
16      do it that it quickly. Anymore optimistic forecast  
17      would have been simply not attainable and we had to be  
18      reasonable, bearing in mind the assumptions of the  
19      time.

20              Remember that gearing up was dependent  
21      upon the cost forecasting being right and all the other  
22      factors. We did get the money, that the stock did come  
23      in on time and all those things and we knew we were  
24      into a very ambition program, but no attempt to be  
25      modest.

1 THE CHAIRMAN: Was there any attempt by  
2 the Ministry right at the outset to say to Cabinet at  
3 that time: It's terrific, you set a goal, but we can't  
4 reach it and can tell you that right now.

5 MR. CARY: I am not aware if that was  
6 said or not. I don't believe it was. We have the --  
7 implementation schedule was accompanied by a set of  
8 tasks that we had to do and we knew we couldn't do  
9 those tasks overnight.

10 But we knew in year three or four we  
11 would have to reassess the position. So I believe that  
12 they wanted to see how it worked and to come back and  
13 look internally at how we have done three or four years  
14 down the piece.

15 THE CHAIRMAN: I guess what I am having a  
16 lot of difficulty with is that Cabinet should choose an  
17 option that was more or less unattainable right at the  
18 outset and why the Ministry, in presenting the options  
19 to them, wouldn't have said that the maximum you can go  
20 to in choosing within our capability is "x" number of  
21 million cunits per acre period, if you choose something  
22 higher we won't realistically be able to accomplish it.

23 MR. CARY: The recommended option in the  
24 document is 12-million. That's what the document says.

25 THE CHAIRMAN: So in effect, you did

1 that.

2 MR. CARY: We recommended the summary --  
3 executive summary in front of the document recommends  
4 12-million.

5 THE CHAIRMAN: But was that tied in to  
6 your capability at the same time?

7 MR. CARY: We knew it was optimistic but  
8 we wanted to be bold, we were desperate to put a  
9 program of building new forest in the area of the  
10 undertaking. We were suffering at that time, we wanted  
11 to be bold and we hoped it would work. So there was  
12 some rather heroic assumptions made at that time with  
13 the best motives.

14 MR. MARTEL: But were they? I mean, if  
15 you knew at the time you couldn't achieve it, how  
16 heroic is it? And you just know you can't meet it and  
17 yet, in fact, you just told the Board here that your  
18 option was 12-million, you couldn't meet nine.

19 MR. CARY: We haven't met nine. We  
20 haven't met nine, we didn't know that then I suppose.

21 MR. MARTEL: Yes, I know.

22 MR. CARY: We are on a learning curve and  
23 if you talk to the authors of the document fifteen  
24 years ago, they may have been - I am looking at it from  
25 hindsight - they may have been much more optimistic.

1                   We are now into the age of metric, so  
2       390,000 acres converts to 158,00 hectares.

3                   MR. MARTEL: It looks better.

4                   MR. CARY: What?

5                   MR. MARTEL: It looks better in metric.

6                   MR. CARY: So that is the implementation  
7       schedule that we proposed effective in fiscal '73 and  
8       '74 which is this point right there (indicating). That  
9       is 73-74 fiscal, the year ending March 31, 1974. The  
10      10-year implementation schedule. This is Document No.  
11      2.

12                  MR. FREIDIN: Q. Again, that is the  
13      schedule for regeneration--

14                  A. That's correct.

15                  Q. --regeneration treatments?

16                  A. Yes. Sorry. This is the schedule  
17      for regeneration treatments.

18                  MR. MARTEL: What page would I find that  
19      on, please?

20                  MR. FREIDIN: page 62.

21                  MR. MARTEL: Thank you.

22                  MR. CARY: This details year by year the  
23      phased sequence of treatments that were planned over  
24      the next 10-year period and, as you see, as I have  
25      said, we had to increase our program, we were somewhere



1 around 60,000 hectares in 1972 and we had to increase  
2 our program some two and a half times.

3 MR. FREIDIN: Q. And the regeneration  
4 treatments that would be covered by this schedule, are  
5 those the regeneration treatments which were identified  
6 on Exhibit No. 136?

7 MR. CARY: A. That's correct.

8 Q. That would be planting of different  
9 types, seeding, modified harvest cutting and  
10 scarification?

11 A. That's correct. That was exhibit  
12 137, not 136.

13 Q. Can you advise where in the province  
14 these particular treatments were to be carried out?  
15 Was there any identification of that back in the early  
16 70s?

17 A. When the implementation schedule was  
18 first developed there was no specific piece of  
19 geography. There was no identification in 1972 in the  
20 options document, for example, on exactly where these  
21 treatments would take place.

22 All the documents said and all that three  
23 hundred -- 158,000 hectares and you have to treat that  
24 amount somewhere in the province on provincial Crown  
25 land and agreement forests on the land.

1 Q. Did the Ministry, however, identify  
2 in a general way what part of the province these  
3 activities should occur on?

4 A. Yes, it did, immediately, yes that  
5 there was no point in setting up a for 390,000 acres.  
6 We have to then get a bit more specific.

7 So document No. 3 gives you an idea of  
8 some -- a bit of geography. Again, we are dealing with  
9 regeneration treatments, the total in the province of  
10 158,000 hectares, 90 per cent of which is in the area  
11 of the undertaking.

12 The four northern regions, this blue area  
13 (indicating) are in the area of the undertaking and the  
14 Algonquin region which is approximately half of  
15 southern Ontario is in the area of the undertaking. So  
16 we are looking at 90 per cent of the hectares in the  
17 area of the undertaking, approximately 90 per cent  
18 within the area of the undertaking.

19 Now, that's the first distribution of  
20 regeneration targets.

21 Q. And 158,000--

22 A. Hectares.

23 Q. --hectares was the level of the  
24 regeneration treatment that you were expecting to begin  
25 10 years after the implementation schedule was put into

1 place?

2 A. That's correct.

3 Q. And then every year thereafter?

4 A. That's correct.

5 THE CHAIRMAN: Well, Mr. Cary, when you  
6 say begin, do you not lead up to the 158; in other  
7 words, you are treating an increasing amount each year?

8 MR. CARY: That's correct, I am sorry.

9 THE CHAIRMAN: So at the end of 10 years  
10 you are at 158?

11 MR. CARY: That's correct, I am sorry.

12 MR. FREIDIN: If that isn't what I said,  
13 that is what I intended to say -- or to ask.

14 Q. Now, Mr. Cary, can you advise, was an  
15 implementation schedule prepared in relation to any of  
16 the activities, any silvicultural activities in  
17 addition to regeneration treatments?

18 MR. CARY: A. Yes, it was.

19 Q. And could you advise for what type of  
20 silvicultural treatments were there such schedules  
21 prepared?

22 A. For an array of silvicultural  
23 treatments. As I have pointed out, regeneration  
24 treatments aren't the only thing we do in the province.  
25 So we had to gear up for site preparation, so there was

1 an implementation schedule for site preparation as  
2 there was for tending.

3 The planting was split off from seeding.  
4 Within those regeneration treatments, we had a detailed  
5 breakdown of how much, of what treatment we estimated  
6 should be done.

7 There is obviously a relationship between  
8 site preparation and planting and seeding. The more  
9 planting and seeding you do, the more site preparation  
10 you have to have. Again, a relationship between  
11 tending and regeneration and also, more importantly,  
12 and what type of regeneration you carry out. The more  
13 planting you do, probably the more tending you want to  
14 do. So there is a tie-in between the silvicultural  
15 activities to the regeneration aspects.

16 Q. Okay.

17 A. Paragraph 12, by the way, of the  
18 evidence, details some of the other activities like  
19 seed collection and nursery stock production.

20 Q. Again, you have already described in  
21 your evidence the timing of those kinds of activities  
22 in relation to the actual planting of a tree, assuming  
23 that that is what you were going to be producing the  
24 seed for?

25 A. That's correct.



1 Q. I understand, Mr. Cary, that there  
2 were two adjustments in the Implementation Schedule  
3 after its inception in 1972?

4 A. That's correct.

5 Q. And could you advise when those two  
6 adjustments occurred and the reasons for them?

7 A. The first adjustment occurred in 1977  
8 and the second adjustment occurred in 1984.

9 Q. And I understand that Document No. 4  
10 actually speaks to this particular matter?

11 A. Yes, it does. I would like to show  
12 an overhead of Document No. 4 to illustrate the  
13 adjustments.

14 Q. Perhaps, Mr. Cary, if you could sort  
15 of hold off talking about the causes for the changes  
16 until later in the evidence and perhaps at this stage  
17 just describe the adjustments for me.

18 A. I would like to do that. I will be  
19 leading evidence later, Mr. Chairman, giving you the  
20 reasons for the adjustments, the reasons for the  
21 shortfalls and talking about, as I have said, some of  
22 the implications of those.

23 In 1976 we had to cope with some  
24 realities of the day and I will be telling you about  
25 those realities of the day. But, briefly, there was

1 some budget problems, there was some staffing problems.  
2 We thought it best then to make an adjustment to the  
3 implementation schedule.

4 We kept the same target level of 390,000  
5 acres or 158,000 hectares, but we became a little more  
6 modest. We delayed the implementation of that target  
7 by two years and that red line called Revised  
8 Implementation Schedule 1977 with the crosses on it is  
9 the adjustment we made.

10 We were on that green line up until '76.  
11 We then adjusted the schedule and the effect of that  
12 adjustment was to delay the 10-year schedule and make  
13 it into a 12-year schedule, two years.

14 A second adjustment was carried out,  
15 effective 1984, and again there were reasons for that,  
16 but the adjustment delayed the implementation  
17 further -- sorry, delayed the achievement of that  
18 target of 150,000 hectares by a further three years.

19 So the schedule became a 15-year  
20 implementation schedule rather than a 10-year  
21 implementation schedule. As I said, I will be talking  
22 about the reasons for those adjustments a little bit  
23 later. That shows the blue line is the 1984  
24 adjustment.

25 Q. And just for the record, in this

1 portion of Mr. Cary's evidence the green line is the  
2 line which is--

3 A. The original.

4 Q. --which is the original on the left,  
5 all right. The red is the revised '77 and the blue  
6 line that he referred to is the revised '84 line.

7 Mr. Cary, could you refer to Document No.  
8 5, please.

9 A. I believe this document refers to  
10 some of the assumptions which were made at the time the  
11 options were prepared by the Ministry of Natural  
12 Resources. The options I speak of are those in  
13 relation to a Forest Production Policy.

14 A. That's correct.

15 Q. And this particular document is  
16 referred to in paragraph 14 of the witness statement?

17 A. That's correct.

18 Q. And if we look at 14, it indicates in  
19 the -- sorry, in the third last line it says:

20 "Some of the assumptions underlying the  
21 Forest Production Policy at the time it  
22 was established were overly simplistic."

23 Is it the intention of paragraph 14 to  
24 indicate that all five items referred to on Document  
25 No. 5 were overly simplistic assumptions?

1                   A. No. I believe that three were overly  
2                   simplistic; Nos 1, 3 and 4 and that two, I would term  
3                   them perhaps outdated and in need of revision and that  
4                   is No. 2 and 5.

5                   Q. Could you advise the Board as to why  
6                   certain assumptions that you have identified were  
7                   simplistic and others have become outdated?

8                   A. Yes. If I could deal with the first  
9                   one which talks about yield.

10                  As I have explained, the assumptions in  
11                  the '72 Forest Production Policy were that 10 cunits  
12                  would come from natural regeneration and 20 cunits per  
13                  acre from treated areas.

14                  I have already explained - this is an  
15                  average - all species, all site classes. What we have  
16                  done in our modeling exercise that you will be looking  
17                  at later, and what we intend to do in our new timber  
18                  production policy is use different volumetric numbers  
19                  that are geared to species and to regeneration  
20                  treatments.

21                  How much effort we expend on those  
22                  particular efforts, whether we plant or seed, we expect  
23                  different yields from the areas that we treat  
24                  differently and we think that that assumption needs --  
25                  was too simplistic at the time.



1                   The second assumption that I would like  
2                   to discuss is No. 3, that the old forest would  
3                   disappear by 2020. The intent of the policy was to  
4                   establish a new forest to meet industrial demand, so  
5                   the dependence on the new forest would obviously depend  
6                   on the option chosen and the demand over that period.

7                   The document says very little about old  
8                   forest and we think that is one of the problems. Page  
9                   34 mentions old forest, but we think that the implicit  
10                  assumption and, of course, the selection of 9.1 would  
11                  be new forest, that the old forest would disappear by  
12                  2020 was an incorrect one. And what we are going to do  
13                  in our new timber production is make sure, and you have  
14                  heard about stretching the old forest and using it  
15                  better. So we believe that that assumption in  
16                  particular was particularly sound.

17                  Q. I understand that some of the  
18                  scenarios which will be presented by Mr. Gordon and Dr.  
19                  Osborn in fact deal with the old forest being stretched  
20                  out in certain situations?

21                  A. That's correct.

22                  Q. No. 4 in this list, selection of a  
23                  50-year rotation for the new forest, optimistic, again,  
24                  simplistic as well. Applied against all species, all  
25                  site classes, all types of regeneration treatment.

1                   We believe that now we have - and again  
2           Dr. Osborn and Mr. Gordon will show how we have refined  
3           that assumption and matched rotation better to  
4           treatment, better to species. So that we corrected the  
5           time, best at the time, benefit of hindsight, rather  
6           simplistic.

7                   The last two --

8                   Q. Perhaps just before we go on, just as  
9           a matter of reference the rotation ages which were used  
10          for softwoods and intolerant hardwoods in the model  
11          that Dr. Osborn and Mr. Gordon speak to are found on  
12          page 278, again, Document 41.

13                   I don't intend to deal with it now but  
14          that is a reference that you may want to make.

15                   A. I would like to deal with the last  
16          two. The amount of naturally regenerated area picked  
17          and kept steady at 130,000 acres per year. Well, it  
18          may have been valid and a good assessment of the cut  
19          over between '66 and '69 but we don't believe -- we  
20          believe it needs updating now.

21                   We know that all sorts of things have  
22          changed out there, the cut over, the harvest has grown,  
23          we are getting probably much more than 130,000 acres of  
24          natural regeneration each year, we need to update that  
25          and make it more precise.

1 Treatment cost forecasts. The  
2 assumptions made at the time about future costs of  
3 treatment all the way through the 70s - and I will be  
4 explaining more of this later - turned out to be simply  
5 way off. We didn't - obviously, again, hindsight being  
6 being perfect - didn't have a particularly perfected  
7 way of forecasting treatment costs because when --

8 MR. MARTEL: Could I ask a question.

9 MR. CARY: Sorry.

10 MR. MARTEL: Because you have just made a  
11 statement. You said 130,000 was anticipated as the  
12 amount that would naturally regenerate. You then went  
13 on to say, I think, that you are probably getting more  
14 than you had anticipated you would get.

15 That being the case, why haven't you  
16 reached your goal? If you are getting more, therefore,  
17 it is costing less, you should have been able to  
18 achieve more and reached a desired goal. I think  
19 earlier you said you hadn't reached that level yet.

20 MR. CARY: We don't know. What goal are  
21 you talking about, the 9.1?

22 MR. MARTEL: No, you said -- you said we  
23 hadn't reached what we were attempting to treat a  
24 little while ago. I will just try and find it.

25 When we did our assumptions and the

1 amount that we were in fact regenerating, I think was  
2 indicated on one of the slides, if I just go back --  
3 yes, page 64, you had to reassess your production  
4 policy implementation moving it from 10 years to 15  
5 years to achieve the desired goal.

6 I think you just said that one of the  
7 assumptions you made was that 130,000 acres would be  
8 the amount that would be regenerated naturally, but  
9 that in fact that was simplistic and, in fact, there is  
10 more that regenerates naturally than you had  
11 anticipated.

12 MR. CARY: Probably, yes.

13 MR. MARTEL: Now, if that being the case,  
14 then why would we not be closer to the goal or have  
15 achieved the goal if more in fact is regenerating  
16 naturally and you wouldn't have to regenerate as much?

17 MR. CARY: When we talk about 10 cunits  
18 it is at rotation age. We don't know that until we get  
19 there, so to speak.

20 We are talking about 10 cunits at  
21 rotation age. We are interested in yield and output in  
22 yield, so there may be more coming back than we think.  
23 We don't know how well that -- how much or how well  
24 that natural regeneration is going in any quantitative  
25 sense at this juncture.



1                   MR. MARTEL: But I think you missed my  
2                   question. Maybe I didn't phrase it properly. You have  
3                   had to revise your schedule for regeneration twice in  
4                   1976 and 1984.

5                   MR. CARY: And that schedule applies to  
6                   artificial only -- regeneration treatments only.

7                   MR. MARTEL: Okay. But if more is  
8                   regenerating on its own than you had anticipated, would  
9                   that not mean that the amount you have to regenerate is  
10                  thus reduced?

11                  MR. CARY: It could mean that, but we  
12                  don't know that. We simply don't know because we  
13                  haven't got that yield yet, that yield is way down the  
14                  road, way down in the future.

15                  MR. MARTEL: I understand that, but you  
16                  are not meeting the amount that you need to regenerate  
17                  annually just to catch up to what has already been cut.  
18                  I mean we are falling -- we fell behind the anticipated  
19                  goal for 10 consecutive years.

20                  MR. CARY: That's correct.

21                  MR. MARTEL: All right. And that didn't  
22                  depend on whether we were going to cut it, that  
23                  depended on how much we were in fact investing in  
24                  regeneration.

25                  I am asking a very simple question: If

1 the amount that you wanted to regenerate is reduced  
2 because natural regeneration is greater, then the  
3 efforts to regenerate that which isn't regenerated  
4 naturally should be easier to meet because, in fact,  
5 more is regenerating on its own hook.

6 MR. CARY: You could be right, sir, but  
7 we have chosen to continue at that government policy  
8 level which is the 390,000 acres and we believe if we  
9 are going to have a new forest in time we should keep  
10 striving for that objective. We hope we have a  
11 cushion, but we don't know.

12 MR. MARTEL: Okay. Well, you might have  
13 just answered by saying that you might have a cushion  
14 because it seems to me that you would have to have  
15 more, let's say, on the go than you thought you were  
16 going to have because of the natural regeneration.

17 MR. CARY: I believe that is the case,  
18 but I am unable to quantify that.

19 MR. MARTEL: Thank you.

20 MR. CARY: I believe, Mr. Freidin, I was  
21 talking about treatment costs and that was No. 5 on the  
22 list of assumptions, and we found out by looking at  
23 what had actually cost us that our cost projections  
24 weren't particularly good.

25 We weren't -- our forecasts, because of

1 inflation, because of all sorts of things, simply  
2 proved inadequate. We need to update those with the  
3 benefit of hindsight and do some good forecasting in  
4 the future and that is what we will be doing.

5 MR. FREIDIN: Q. Now, Mr. Cary, in  
6 reference to Document No. 5, I believe completes the  
7 reference that you wanted to make to the first part of  
8 the witness statement that you are dealing with.

9 If you turn to page 25 of the witness  
10 statement there is a heading The 1972 Production Policy  
11 Implementation, Planned Versus Actual.

12 Could you advise, please, what this next  
13 section, which goes with paragraph 19 on to 24, is  
14 going to deal with?

15 MR. CARY: A. Yes. Not only will it  
16 provide you with some information on tracking, the  
17 comparison of planned to actual, but it would also go  
18 into examining the reasons for not achieving some of  
19 our targets, and assessing the implications of not  
20 achieving some of what we planned to do.

21 I should also like to make perfectly  
22 plain - I believe Mr. Freidin mentioned this earlier -  
23 what I am not talking about here is regeneration  
24 success, that will be talked about later. What I am  
25 talking about here is effort, field silvicultural work.

1 So from tracking, I want to go on in paragraphs 22, 23,  
2 24 into some of the reasons behind what we have done in  
3 the last 16 years essentially.

4 Q. I understand that Document No. 6 is a  
5 graph which describes the actual and proposed  
6 regeneration treatments?

7 A. Yes. I would like to put this up on  
8 the overhead.

9 Q. And on that document, Mr. Cary, when  
10 you say proposed, can you advise, is what was proposed  
11 in 1972 or is it as adjusted?

12 A. This shows the adjustments. It links  
13 together the three lines that I showed you before, the  
14 original 10-year year implementation schedule goes from  
15 '73 to '76, the first adjustment goes from '77 to '84,  
16 and then the '84 to '91 adjustment is shown as well.  
17 So it links together those three lines.

18 Q. Can you identify where it is shown?

19 A. I am sorry, I don't understand the  
20 question.

21 Q. Is the adjustment shown in the graph  
22 anywhere?

23 A. Yes. You will see a reduction in the  
24 value from '76 to '77, the proposed line comes down.  
25 There is another adjustment between the years '83 and



1 '84 in the proposal and I think those are apparent on  
2 the graph.

3 Q. All right. Can you continue then and  
4 indicate...

5 A. This is the comparison of actual and  
6 proposed regeneration treatments from the fiscal year  
7 1973-74 in proposal to 91-92, and in actual to 1986-87.

8 As I have said, it is not an indication  
9 of regeneration quality or its success, it indicates  
10 the levels of regeneration treatments.

11 If you follow the lines through, just to  
12 point out some of the -- a peak in the 1980 year, an  
13 anomaly. That was a huge fire year. I don't know if  
14 any of you remember that, but there was an  
15 extraordinary big fire north of town on the Abitibi  
16 Price limits as they were then.

17 Q. North of town?

18 A. North of Thunder Bay, sorry. And we  
19 undertook a massive -- because of the intensity of the  
20 fire, we undertook a massive seeding program and that  
21 peak in the graph is the result of our very successful,  
22 I believe, seeding attempts on that fire. The  
23 shortfall between our proposal in 1986 and our actual  
24 in 1986 is approximately 40,000 hectares,  
25 approximately.

1 I would like to point out that since 1972  
2 we have doubled the size of the program in regeneration  
3 treatments. That is what has happened. If you carry  
4 on that '73 point -- sorry, the '73, '74, '75 point, if  
5 you carry on that graph--

6 Q. Which line of the graph?

7 A. I am sorry.

8 Q. Could you use the pointer, Mr. Cary?

9 A. If one was to carry on this line  
10 here, this blue line here (indicating) you would see we  
11 carried on the same slope and we went to '82, we would  
12 be significantly much more short of our original  
13 10-year implementation schedule.

14 So this gives you some idea of what our  
15 original line was. We adjusted downwards and delayed,  
16 as I have said, during the piece.

17 Q. Mr. Cary, can you advise, is there a  
18 breakdown of the individual regeneration treatments  
19 over time which is covered by this graph?

20 A. Yes, there is. This is an  
21 aggregation, a provincial aggregation of the activities  
22 carried out at the field level, at the management unit,  
23 at the district, at the region level. There is that  
24 breakdown, and then there is a breakdown of the various  
25 activities within regeneration, planting, seeding and

1 the rest of it.

2 Q. And those particular breakdowns have  
3 not been produced by way of evidence in the witness  
4 statement?

5 A. That's correct.

6 Q. And is there any reason why that  
7 wasn't done or wasn't produced?

8 A. Well, apart from the bulk and the --  
9 well, it is a huge amount of data. We thought looking  
10 at -- this panel looks at provincial things rather than  
11 the micro level and we thought it appropriate to show  
12 you the provincial picture, provincial accomplishment.

13 Q. And just in terms of the years on  
14 this particular document, I understand there is perhaps  
15 a little idiosyncrasy in relation to years. When you  
16 say 1974 -- work was done between 1973 and 1974, what  
17 time period are you talking about, like, when does that  
18 period end?

19 A. Each one of those dates, '73 is the  
20 fiscal year '73 which ends on March 31st, 1974. So  
21 that value that you see on the vertical axis on 1973 is  
22 the work that was carried out during that fiscal year.

23 If we go over to '82, for example, that  
24 is the 82-83 year, the work that was carried out during  
25 that fiscal year, starting April 1st, '82, going to

1 March 31st, 1983.

2 Q. Now, on this particular document, you  
3 haven't 1987 mentioned here which, as I understand what  
4 you are saying, would be for the period ended March  
5 1988; is that correct?

6 A. That's correct.

7 Q. And can you advise what has happened  
8 in the most recent year? Can you update this for the  
9 Board?

10 A. As soon as the material is published,  
11 I would give it to the Board.

12 Q. Are you able to advise in a general  
13 way what the results show?

14 THE CHAIRMAN: It should be before the  
15 end of the hearing.

16 MR. FREIDIN: It better be.

17 MR. CARY: Mr. Chairman, I hope to  
18 have -- I have seen the draft statistics for last  
19 year's work and we are about 125,000 hectares which is  
20 10 or 15 more than last year.

21 I can provide the exact figures as soon  
22 as I get them.

23 MR. FREIDIN: Q. Mr. Cary, although you  
24 didn't break out all of the individual regeneration  
25 treatments which compose -- excuse me, included in the



1 one line on Document No. 6, I see by Document No. 7 you  
2 have produced a separate graph for tending.

3 MR. CARY: A. Yes, I have.

4 Q. And that's...

5 A. And I would like to just put this on.

6 Q. Can you advise before you do that why  
7 you chose to show the tending graph as opposed to one  
8 of the other silvicultural activities?

9 A. The tending graph in the example of  
10 an implementation schedule, it doesn't have necessarily  
11 a ceiling. We allow that to float because obviously it  
12 depends on, as I said before, to the type of  
13 regeneration treatment that will be conducted.

14 Within the regeneration, the treatment  
15 mix may change. If we concentrate on more expensive  
16 forms of regeneration, we like to make sure that we  
17 safeguard that investment and, therefore, our tending  
18 may be adjusted upwards.

19 So there is no magic figure for tending.  
20 We want to be able to forecast our long-term tending  
21 program, but there is no magic figure. That will vary  
22 with the type of regeneration treatment that we carry  
23 out.

24 The green line, the actual, the blue the  
25 proposed. If you get out your microscope you will see

1       there is a minor adjustment in '77 but very, very minor  
2       and, again, an adjustment in '84, but very, very minor.  
3       So at that juncture we were adjusting our regeneration  
4       implementation schedules, but we chose not to adjust  
5       our tending implementation schedule. We felt we were  
6       on the right track.

7                   As you see, after some reasonable success  
8       in the early years we then started to fall off, but  
9       over the last four or five years our tending program  
10      has expanded and, in fact, is what we propose to do,  
11      what we plan to do and we are confident that it will  
12      keep above what we plan to do.

13                   So that's why I chose to show tending.

14                   Q. Thank you.

15                   THE CHAIRMAN: Mr. Freidin, at some point  
16      we are going to take a second break and then we will go  
17      for about another hour or hour and a half, perhaps  
18      until 6:00 or 6:15 tonight.

19                   MR. FREIDIN: Once again, your timing is  
20      good. That's the end of this certain line of  
21      questioning.

22                   THE CHAIRMAN: Okay. We will break for  
23      20 minutes.

24                   Thank you.

25      ---Recess at 4:35 p.m.

1 ---Upon resuming at 5:06 p.m.

2 THE CHAIRMAN: Thank you. Be seated,  
3 please.

4 MR. FREIDIN: Mrs. Koven, I have left an  
5 extra copy of Exhibit 138 with you. And without  
6 indicating what I am talking about on the record, Mr.  
7 Chairman, I have made some inquiries and I am batting a  
8 thousand so far.

9 THE CHAIRMAN: Fantastic. I hope we all  
10 do as well.

11 MR. FREIDIN: Q. Mr. Cary, the graphs  
12 that we have looked at which depict the Forest Policy  
13 Implementation Schedule or some of them, they have  
14 looked at the provincial picture.

15 And could you advise, are these figures  
16 or the proposed activities parceled out in any way, or  
17 were they parceled out in any way to Ministry regions  
18 or districts?

19 MR. CARY: A. Yes, they were.

20 Q. And could you advise in a very  
21 general way what was done?

22 A. Yes. When the Forest Production  
23 Policy was established, that 9.1-million cunit volume  
24 was apportioned to the regions. The volume has to come  
25 from somewhere in a geographic sense. So there was an

1       apportionment, as I said, of that 9.1-million to the  
2       eight administrative regions of the province.

3               Coincident with that, of course, was the  
4       translation of the volume target into an area target,  
5       and the area targets were apportioned to the regions.  
6       So there was a split of that 9.1, both in volume, and  
7       that 390,000 acres into regional allocations, for want  
8       of a better word.

9               Q.   Can you advise me what level of the  
10       administrative organization of the Ministry makes the  
11       decision regarding what specific area, what particular  
12       location within the region that the work assigned to  
13       the region will actually be done?

14              A.   The region has that mandate.   Working  
15       with the districts and, therefore, the management units  
16       they develop the plans for the implementation of their  
17       part of that target.

18              And so, as I say, the region has the  
19       mandate, not only working with the districts, not only  
20       to say where those particular treatments will be  
21       carried out, but also what mix of treatments will be  
22       carried out as well, how much planting, how much  
23       modified harvest cutting.

24              Q.   And once the Implementation Schedule  
25       is prepared or amended, does that Implementation



1 Schedule play a role in timber management at the  
2 management unit level?

3 A. In an indirect sense, yes.

4 Q. Perhaps you could explain that?

5 A. I would like to just talk a little  
6 bit about the use of the Implementation Schedule, and I  
7 would like to draw your attention to page 100 of the  
8 Environmental Assessment Document --

9 Q. Exhibit 4.

10 A. Exhibit 4. And draw your attention  
11 to the second paragraph on page 100 which states that:  
12 "The practical application of the Forest  
13 Production Policy in timber management  
14 planning is the use of its associated  
15 Implementation Schedule. The schedule is  
16 used as a benchmark in reviewing at the  
17 regional and provincial level the  
18 aggregate renewal of maintenance  
19 activities which are planned in timber  
20 management plans for management units."

21 So it is used as a benchmark at the  
22 aggregate level. So when I said it doesn't directly  
23 affect the field work on the management unit, it may  
24 affect it in a global sense.

25 Q. And I note in the next paragraph in

1 the Environmental Assessment Document, in the last  
2 sentence, there is the reference to the Implementation  
3 Schedule being used as a determining factor during the  
4 allocation of funds?

5 A. That's correct.

6 Q. Perhaps you could explain what that  
7 means?

8 A. Well, this is the -- the levels to  
9 which we plan in the field are related to the  
10 Implementation Schedule targets. So their proposals,  
11 the field's proposals for achievement of those has to  
12 be put in context.

13 And so when we consider those planning  
14 levels of silvicultural implementation on an annual  
15 basis, we refer back to that annual target for the  
16 region and, in that sense, it is one determining factor  
17 that we used to allocate funds down to the region and  
18 district level.

19 Q. When you say it is one of the factors  
20 that you look at in terms of allocating funds, when you  
21 refer to "we" who are you referring to?

22 A. We being the forest resources  
23 program, forest resources group in recommending  
24 allocations to the assistant deputy ministers north and  
25 south. There is also a factor when we deal with the

1 central agencies, there is a link there as well.

2 Q. So do I take it when you say -- who  
3 reports then to these ADMs, is it main office or is it  
4 region?

5 A. Main office.

6 Q. All right. And can you advise, Mr.  
7 Cary, whether in actually preparing a timber management  
8 plan at the management unit level, whether that  
9 planning is done -- the planning which is done is  
10 affected by the Implementation Schedule?

11 A. That may be the case, it may not be  
12 the case. I simply don't know for each management  
13 unit.

14 Q. Thank you. Would you refer to  
15 Document 8, please. This document is entitled: Three  
16 Decades of Regeneration Treatment on Crown Land.

17 Could you advise, Mr. Cary, the purpose  
18 for which this document was produced?

19 A. Yes.

20 Q. Well, why don't you tell us then?

21 A. Sorry?

22 Q. Why don't you tell us.

23 A. I thought I would show what's  
24 happened in the province over the last 30 years, and  
25 the figures '57, '67, '77 and '87 portray the level of

1 regeneration treatments that have actually happened  
2 over the last 30 years, to give you some idea of scale  
3 and some idea of what we have achieved.

4 What I would like to do is to add some  
5 information that may assist the Board in looking and  
6 seeing how we have progressed, both in terms of  
7 geography, talk about the change in techniques we have  
8 used along the way, and the type of regeneration  
9 treatments we have used.

10 If you go back to '57, 13,000 hectares,  
11 almost entirely in southern Ontario, just a few  
12 hectares in northern Ontario. Crown land in agreement  
13 forests planting, the aforestation of abandoned  
14 farmland. That was when the agreement forests were set  
15 up, it was planting, almost purely planting.

16 Q. And this is back -- you are now  
17 referring to the 1957 time?

18 A. That's correct. We have progressed  
19 into the boreal forest in the early 60s, and I believe  
20 you remember that piece of stone with a cable through  
21 it that Mr. Armson showed you, that was a picture of  
22 some of our site preparation efforts in 1962.

23 So in the 60s, we progressed from  
24 southern Ontario into northern Ontario. We started not  
25 only to plant, we started to have a look at the options



1 for seeding. Site preparation techniques started to  
2 change from the site preparation that occurred on  
3 abandoned farmland, very different terrain, very  
4 different forest. So we came up to the boreal forest  
5 in the 60s.

6 The Implementation Schedule, 1972,  
7 approximately 60,000 hectares at that stage. Over the  
8 last 16 years, as I have said, we have doubled our  
9 efforts.

10 By 1975 -- sorry, by 1977 we were at  
11 75,000 hectares and, again, with a program with no FMAs  
12 at this juncture we were very, very much in the boreal  
13 forest at that stage. Southern Ontario, the planting  
14 there settled down, flat line, in fact it is now  
15 decreasing. So compared to '57 we were in a totally  
16 different place using a lot of different techniques.

17 Q. Can you advise approximately what  
18 percentage of the regeneration treatments now occur in  
19 northern Ontario?

20 A. In the area of the undertaking about  
21 90 per cent, and in northern Ontario 80 per cent, in  
22 that ballpark.

23 The 1980s saw the advent of the FMAs. The  
24 period 81-86 saw a doubling of planting stock  
25 availability for planting in northern Ontario. So I

1       guess that the point of the graph is to illustrate  
2       where we have come from, how things have changed,  
3       changed in geography, changed in techniques, changed in  
4       regeneration agreements.

5                   Q.   In terms of planting, have any  
6       changes occurred, major changes occurred over the time  
7       period that you have referred to?

8                   A.   We use container stock extensively  
9       now and bare root stock.  Previously, prior to 1980,  
10      most of our -- we had a very small container, Ministry  
11      container program at that stage.

12                  Q.   Mr. Cary, the evidence regarding  
13      planned versus actual indicated a number of shortfalls  
14      in achieving the Implementation Schedule and it also  
15      referred to there being an adjustment in this schedule  
16      on two occasions.

17                  Can you advise the Board in a general way  
18      what this really means and its implication for the  
19      forest resources program?

20                  A.   Yes.  The Forest Production Policy  
21      and the targets set out in the Implementation Schedule  
22      were and still are perhaps bold, bold objectives, but  
23      we thought they were reasonable at that stage.  We feel  
24      that they are worth achieving and we've done our  
25      damnest to achieve them.

1                   We have our problems. Like any policy of  
2 government, we are subject to funding from the  
3 legislature. I think we have made the best use of the  
4 money that has been available to us.

5                   It is my view that because we haven't met  
6 our targets, we are certainly not going to run out of  
7 forest, there is new forest coming on. It may take a  
8 little longer to come on stream than we anticipated,  
9 but there is new forest growing out there.

10                  We have no plan, to go back and treat that  
11 so-called backlog, we know it is regenerating  
12 naturally. So despite the fact we haven't met our  
13 targets, we believe that a new forest is there and it  
14 is growing and we are not going to run out of forest  
15 because we haven't met our Implementation Schedule  
16 targets.

17                  Q. Mr. Cary, if I might, I would like to  
18 refer you to the section of the witness statement --

19                  THE CHAIRMAN: Mr. Freidin, if I can just  
20 ask one quick question in there.

21                  Although you have not met your target for  
22 production, what has happened with the targets for  
23 demand? Have those been as high as what the policy  
24 originally forecasted?

25                  MR. CARY: The Implementation Schedule in

1 the early years forecast cut and you could direct --  
2 you could link that to demand in a sense, and it is the  
3 planned to actual cut for those first years. After a  
4 while we didn't continue to keep those sort of records,  
5 we are pretty close.

6 The cut has, over the last few years, has  
7 kind of flat-lined. I haven't seen any forecasts of  
8 cut for the later years. So if we can link that to  
9 demand, we seem to be on track, a reasonable track.

10 THE CHAIRMAN: So the gap -- there is not  
11 a growing gap; is that what you are saying?

12 MR. CARY: I don't know. I can't answer  
13 that question. There will be information on demand  
14 presented in a subsequent panel that I hope would cover  
15 that.

16 THE CHAIRMAN: Okay.

17 MR. FREIDIN: Q. Mr. Cary, if you  
18 could -- I refer you to paragraphs 22 through to 24 of  
19 the witness statement. They deal primarily with costs  
20 and various activities of the Ministry of Natural  
21 Resources that occurred in addition to regeneration  
22 activities themselves; is that correct?

23 MR. CARY: A. That's correct.

24 Q. And could you advise the Board in a  
25 general sense what the message is that you are trying



1 to convey by those paragraphs?

2 In other words, what's important for the  
3 Board to understand as a result of reading those  
4 particular paragraphs, paragraphs 22 to 24?

5 A. We would like to tell the Board that  
6 we don't only track, we assess, and the results -- we  
7 will be going through the results of those assessments.  
8 We are -- so we monitor what we are doing.

9 It also points out that we do many other  
10 things than plant trees. There are all sorts of  
11 activities that we have to carry out for implementation  
12 of the program besides planting, besides regeneration.  
13 We have learned through experience and we have  
14 adjusted.

15 Yes, we have some problems and we have  
16 tried to make -- we have tried to alleviate those  
17 problems and to make sure that the program is delivered  
18 in an efficient manner. So that's the gist of those  
19 paragraphs, Mr. Freidin.

20 Q. And do those paragraphs also include  
21 an explanation of the shortfalls which occurred, in  
22 fact, in achieving the Implementation Schedule?

23 A. Yes, they do.

24 Q. And as I look at those paragraphs,  
25 Mr. Cary, they appear to be broken down into time

1 frames. There are in fact two time frames referred to.  
2 The first being 1973-1980, which you see you refer to  
3 in paragraph 22 subparagraph (i) and the time period  
4 81-87?

5 A. That's correct.

6 Q. Could you refer to paragraph 22(iii)?

7 A. Yes.

8 Q. And you will see that that deals with  
9 the first period, the end actually of the first period,  
10 refers to certain matters which became apparent to the  
11 Ministry of Natural Resources in the late 1970s.

12 A. That's correct.

13 Q. And it indicates that:

14 "It became apparent by the late 70s that  
15 the forest resources program that was  
16 launched in '73 lacked the  
17 infrastructure, the technology, and the  
18 expertise to adequately implement the  
19 scale of program, protect the timber  
20 resource and support itself, and without  
21 this infrastructure, program support and  
22 expertise, the forest resources program  
23 would not be able to sustain its  
24 efficiency and its effectiveness."

25 Could you advise what you mean when you

1 say -- when you refer to infrastructure?

2 A. Yes. When I talk of infrastructure  
3 here I mean capital facilities, like permanent  
4 nurseries, greenhouse facilities, seed extraction  
5 plants, seedling storage facilities, and most  
6 importantly roads, the need to have roads so that we  
7 could properly schedule the cuts and properly utilize  
8 the forest.

9 So it is those things that I am talking  
10 about when I refer to infrastructure.

11 Q. So then you are indicating then in  
12 1973 that infrastructure that you have described was  
13 lacking?

14 A. That's correct.

15 Q. What do you mean when you say in 1973  
16 the program lacked the technology? What are you  
17 referring to by technology?

18 A. The technology simply wasn't  
19 available to treat, to mechanically site prepare, for  
20 example, many of the sites in the boreal forest in the  
21 early part of the 70s and in the mid-70s. We simply  
22 didn't have the experience, we didn't have the  
23 equipment, we didn't have the technology to treat all  
24 those sites.

25 Another example would be that we didn't

1 have what we have now, what industry uses to harvest  
2 very wet sites in the clay belt: Wide tires, low  
3 flotation -- high flotation, skidders, for example. We  
4 had great trouble accessing those stands.

5 Q. In 1973?

6 A. And for most of the 70s. Fire, our  
7 technology in fire, in protection is much enhanced now  
8 than it was later -- sorry, early in the 70s.

9 Q. Could you advise, in what respect do  
10 you suggest that the Ministry lacks the expertise to  
11 adequately implement the scale of the program and  
12 protect the timber resource and support itself as of  
13 1973?

14 A. We simply didn't have the staff, the  
15 resources during that period, the expertise, both  
16 technical and professional, to implement the program in  
17 the most effective way. We simply didn't know many  
18 things and the skills were not available.

19 So, again, dependent on how many people  
20 you get to - so expertise, both in a technical sense -  
21 and in how many people we could get to make the thing  
22 work.

23 MR. MARTEL: May I ask a question. What  
24 is the skill? Were these skills available, let's say,  
25 at this time in Finland or in Sweden or other countries



1       like that? They are somewhat ahead of us, I think, or  
2       am I...

3                       MR. CARY: I am not familiar with the  
4       Swedish or the Finnish situation. If Mr. Armson would  
5       like to comment on that. I simply cannot make a  
6       definitive judgment on that, Mr. Martel, I am sorry.

7                       MR. ARMSON: If I might, Mr. Martel, I  
8       think the prime difference is twofold. One is the  
9       forest conditions, the boreal forest conditions of  
10      North America are really very dissimilar in terms of  
11      silvicultural application than the "managed forests of  
12      Scandinavia". Point number one.

13                      In terms of the species mix, not so much  
14      of the variability in terrain, but the species mix.  
15      You have to remember that this forest is one that is  
16      still being opened up. Their forests, for the most  
17      part, have been opened up and accessed for some time.  
18      So that is one factor.

19                      The second thing is that they are dealing  
20      with basically three species: Scots pine, spruce and  
21      birch. We are dealing with a far greater number of  
22      species including many competing species that are  
23      non-tree, I mean, I am speaking of the shrubs. That is  
24      one of the basic differences and that has a major  
25      complicating effect.

1 MR. MARTEL: But if they were using,  
2 let's say, different types of equipment -- they were  
3 involved in silviculture long before us.

4 MR. ARMSON: That is --

5 MR. MARTEL: We are so far behind, maybe  
6 not today but at that time, which has only been 15, 20  
7 years ago.

8 MR. ARMSON: That is correct. And in  
9 fact, we -- well, I don't want to get into this too  
10 long, but they borrowed some stuff from us. But  
11 basically a lot of the site preparation equipment which  
12 Mr. Cary has referred to developing that, the initial  
13 equipment that came out here from Scandinavia that we  
14 used was much too light for many of our conditions.

15 The forerunner of what we now have is the  
16 Bracke and, in fact, the Scandinavians were very quick  
17 to recognize they had a market, that if they were  
18 modify and change their equipment, and they did,  
19 particularly for the North American, and I would say  
20 for the eastern Canadian marketplace.

21 MR. FREIDIN: Q. Could we now, Mr. Cary,  
22 go back and could you expand or identify what type of  
23 expertise did you indicate or do you believe was  
24 lacking in 1973?

25 You mentioned the number of people that

1 had the expertise. Is there a special expertise that  
2 was lacking or can you just sort of help us out with  
3 what you mean by that?

4 MR. CARY: A. As I said, there was both  
5 lacking -- we lacked people, we lacked staff, and we  
6 lacked the knowledge that we gained through -- that we  
7 are gaining now through experience.

8 So it is the expertise in the field  
9 that -- we were still on a learning curve then and we  
10 lacked some expertise on how best to do things out  
11 there.

12 Q. Can you indicate the sort of  
13 knowledge that you have now that you didn't have then,  
14 the type of thing that you are referring to?

15 A. We have much improved knowledge of  
16 the site-preparation activity, coupled with of course a  
17 much greater range of equipment that is available, but  
18 we now have a very good idea of where to use it and how  
19 to use it. During the mid-70s we were unsure of how to  
20 use it and on what sites it worked best.

21 Q. You also refer in that paragraph  
22 to -- you used the phrase scale of the program. What  
23 are you referring to when you refer to the scale of the  
24 program?

25 A. Well, as the program expanded, we had

1 some managerial problems, how to conduct the huge  
2 program of site preparation, and we found that we had  
3 to go to outside contractors, for example. We hadn't  
4 really anticipated that.

5 So we were -- we had some problems with  
6 growth. Tree planting went up, we were struggling with  
7 our stock production system to make sure that that was  
8 effective in producing an increasing number of trees.  
9 So we had growing pains.

10 Q. And you referred to -- in the last  
11 line of page 26 you say:

12 "...without this infrastructure, program  
13 support and expertise the forest  
14 resources program would not be able to  
15 sustain its efficiency and  
16 effectiveness."

17 When you refer to program support, is  
18 that something that is described in the witness  
19 statement somewhere?

20 A. Yes, it is. It is described in  
21 sub-paragraph (v). Can I leave that discussion until  
22 we come to that?

23 Q. Yes. Okay, we will do that.

24 Now, what I would like to know: Is there  
25 any -- a general question: Why didn't the Ministry



1 realize that this infrastructure technology and  
2 expertise was lacking; why, as I read the statement,  
3 wasn't this realized until the late 1970s?

4 A. I suppose the answer is that we  
5 hadn't anticipated the needs correctly. The  
6 professionals at the time working on what they thought  
7 were the appropriate forecasts and assumptions of the  
8 time believed that that's what could happen.

9 But as we got on this learning curve, as  
10 I said, we ran into some problems and they started to  
11 be picked up in the mid-70s, and by the late 70s we  
12 made some -- we started to think about all sorts of  
13 other things besides regeneration treatments and  
14 getting trees in the ground.

15 Q. And I understand - before you finish  
16 your evidence in relation to this first part of the  
17 statement - that you will be commenting on some of the  
18 developments in relation to these other matters?

19 A. That's correct.

20 Q. Now, during that same time period,  
21 1971-1980, Mr. Cary, I understand that a report was  
22 prepared within the Ministry dealing with the  
23 performance of the Ministry under the Forest Production  
24 Policy Implementation Schedule for the period 1973-74  
25 to 1980-81. Is my information correct?

1 A. That's correct.

2 Q. And was that report the Dixon Report  
3 which is Document No. 9 of the witness statement?

4 A. That's correct.

5 Q. Could you advise who Mr. Dixon was?

6 A. Yes.

7 Q. By the way, that is Document 9  
8 starting on page 69. Could you advise us who Mr. Dixon  
9 was?

10 A. Mr. Dixon worked for the Ministry of  
11 Natural Resources for at least 30 years. He was the  
12 author of the 1963 Forest Resources Inventory Document.

13 He then became head of the Reforestation  
14 Branch, a director of forest resources, he was --  
15 forest resources branch at main office. He was one of  
16 the principal author of the document that has been  
17 tendered as an exhibit today, Document No. -- Exhibit  
18 No. 136, the Forest Production Policy Options for  
19 Ontario.

20 After his job at main office, he became a  
21 regional director and retired as assistant -- as acting  
22 assistant deputy minister of southern Ontario.

23 Q. I understand that he is deceased?

24 A. That's correct.

25 Q. Could you advise why the Ministry had

1 Mr. Dixon assess the performance under the Forest  
2 Production Policy Implementation Schedule and to submit  
3 a report to the Ministry?

4 First of all, is my information correct  
5 that he wasn't actually employed with the Ministry when  
6 he actually wrote this report?

7 A. He had recently retired.

8 Q. So why did the Ministry ask him to do  
9 this?

10 A. It was felt that he would be the best  
11 person to do it. He was intimately familiar with the  
12 development of the policy, the development of the  
13 Implementation Schedule, he was at main office during  
14 the early years of that implementation, he knew more  
15 about that than I think anyone else in the Ministry.

16 Upon his retirement, we hired him to --  
17 we commissioned him to do this report.

18 THE CHAIRMAN: No questions about  
19 objectivity?

20 MR. CARY: No, we had none.

21 THE CHAIRMAN: Because he would have  
22 been -- as a Deputy Minister, would he have not been  
23 somewhat responsible for the actual implementation  
24 during some of those years that he in fact reported on?

25 MR. CARY: He was acting assistant deputy

1 minister, Mr. Chairman, for I think six or nine months  
2 before his retirement. But, yes, he was involved in  
3 the implementation of many of the first years of this  
4 program, yes, but I don't believe it would be a  
5 conflict, I think not.

6 MR. FREIDIN: Q. Does the Ministry  
7 engage others to assess the Ministry as a regular sort  
8 of thing?

9 MR. CARY: A. Yes, we have. We have  
10 done this on a regular basis. Mr. Armson was --  
11 produced a report in 1976 that was commissioned by the  
12 Ministry.

13 THE CHAIRMAN: But that was prior to him  
14 joining the Ministry; wasn't it?

15 MR. CARY: That's correct.

16 THE CHAIRMAN: That would be a  
17 significant difference; wouldn't you agree?

18 MR. CARY: Yes. We also -- but the  
19 reports are similar in nature, sir. We commissioned  
20 Dr. Baskerville in '86 to have a look at our program.

21 The provincial auditor had a look at our  
22 program. There are a lot of people that had a look at  
23 our program and it has been part of our business. We  
24 have gone back and had our program assessed at regular  
25 intervals, sometimes by internal people, sometimes by



1 external people.

2 MR. FREIDIN: Q. Could you advise why  
3 you do that? Why do you do or have these sorts of  
4 assessments done on what you describe as sort of a  
5 matter of doing business?

6 MR. CARY: A. We believe that we carry  
7 out these assessments when assessments need to be  
8 carried out, so there is an objective. We knew we were  
9 in trouble - trouble may be a rather vague word - but  
10 Professor Armson, who was at the University of Toronto,  
11 was commissioned, for example, to look at some specific  
12 problems we were having with the program and proposed  
13 solutions, provide recommendations for action and we  
14 took action, as you have heard.

15 Another example would be the  
16 commissioning of Dean Baskerville. That was a  
17 condition of government, the Accord. One of the  
18 conditions of the Accord was that we conduct an  
19 exercise such as that and that is what we did.

20 But we also -- as I say, Bob Dixon  
21 conducted a thorough examination of this area, of this  
22 Forest Production Policy area because we were concerned  
23 about our lack of progress.

24 Q. In relation to Dean Baskerville's  
25 report, did the Ministry take some action as a result

1 of that report?

2 A. Absolutely.

3 Q. And that has been described to some  
4 extent by the evidence to date?

5 A. That's correct.

6 Q. Did the Ministry take any action as a  
7 result of the Dixon report?

8 A. Yes, it did.

9 Q. And will you be describing that later  
10 in your evidence?

11 A. I will be.

12 Q. Could you capsulize what the Dixon  
13 report contains?

14 A. In very brief capsule form, 221 says  
15 it all.

16 Q. 20...

17 A. Paragraph 22, subsection (i).

18 Q. Of the witness statement?

19 A. Of the witness statement.

20 Q. Page 26.

21 A. Yes.

22 Q. Dixon's conclusion was that  
23 government, budgetary and staffing constraints had  
24 limited the Ministry's ability to make the necessary  
25 investments, and he also commented on the inadequacy of

1       our past forecasts.

2                   The report itself goes into extraordinary  
3       detail as document -- I think it is Document No. 9  
4       which is the report. Essentially what he did was to  
5       compare what we proposed to do to what actually  
6       happened for the years 1973-1988, massive detail and a  
7       unique format.

8                   Q. Did Mr. Dixon's Report refer to any  
9       of the matters referred to in paragraph 22, sub (iii),  
10      the infrastructure, technology, expertise, et cetera,  
11      that I had you comment upon a few minutes ago?

12                  A. Yes, but that wasn't really the focus  
13      of his report. He commented likely on some of those.

14                  Q. What was the focus of his report?

15                  A. To very succinctly tell the results  
16      of our -- to detail the progress between 1973 and 1980  
17      of our efforts and to detail where we fell short, what  
18      were the costs - he looked at costs - and to comment on  
19      those shortfalls or achievements.

20                  Q. You indicated in an answer a few  
21      moments ago that the Ministry took some action in  
22      response to this report.

23                  Could you in fact describe what action  
24      you were referring to?

25                  A. Yes. The first action that came as a

1 result of discussions following Mr. Dixon's Report was  
2 to adjust the Implementation Schedule and that was the  
3 '84 adjustment that I have referred to earlier in my  
4 evidence.

5 We then discussed for the first time in  
6 any comprehensive fashion differing silvicultural  
7 intensities of working in a different way, focusing on  
8 levels of regeneration treatment rather than  
9 regeneration. We looked at the -- at levels of  
10 regeneration, and you are going to hear much more about  
11 this later in our modeling exercise, later in this  
12 panel's evidence. We became concerned with looking at  
13 it in terms of intensity. We thought this was a good  
14 way to go.

15 Q. Is that somewhat different than the  
16 way people looked at it in the 1970s, the early 1970s  
17 when Forest Production Policy options were created?

18 A. Yes. I have talked to you about that  
19 broad brush approach that they used, the average yields  
20 from all site classes, all species. We had a look at  
21 different yields too. We feel we can -- we discussed  
22 after that --

23 Q. First of all, "we" is the Ministry?

24 A. We is the Ministry, sorry. We looked  
25 at yields and we felt that we needed a new set of



1 volumetric yields, not just the 10 and 20 cunits per  
2 acre. So there was lots of discussion about that.

3 We looked at better using the dollars  
4 and, again, this revolved around different  
5 silvicultural levels, different regeneration  
6 treatments, we wanted to make the best use of our  
7 scarce dollars. We also talked about in this area  
8 prime land classification or land classification.

9 Early discussions -- not early, but  
10 discussions about prime site were dwelt on.  
11 But in 1982 a new model, one of the existing models,  
12 the existing OWASFOP model was modified for forecasting  
13 purposes in 1982, and we used it first in 1982.

14 We also started to focus for the first  
15 time -- sorry, I am doing it again, the first time --  
16 we dwelt on the old forest rather than a new forest.  
17 We looked at ways to utilize it better and to stretch  
18 the old forest in a more effective fashion.

19 Q. And I go back, Mr. Cary, where you --  
20 the second matter you referred to about different  
21 levels or intensities of regeneration effort.

22 What were the factors which would cause a  
23 distinction to be made in these discussions which came  
24 after the Dixon Report? What factors would cause there  
25 to be distinction made regarding level or intensity?

1       What factors or things did you look at to make that  
2       kind of judgment?

3                   A.   You would be looking at the  
4       productivity of the site, making sure that where you  
5       spent your silvicultural dollar you got a good return  
6       on that dollar.   So forest productivity was a key item  
7       here.

8                   Q.   Did the Ministry or has the Ministry  
9       developed anything since the Dixon Report that relates  
10      in any way to classifying sites and forest conditions  
11      which might be used in identifying level of intensity  
12      of regeneration effort?

13                  A.   Yes, we have.   We have had soil  
14      surveys, productivity surveys that now go across most  
15      of the area of the undertaking, we have prime lands  
16      inventories.

17                  Mr. Armson has talked to you about land  
18      classification and I believe that the Board has been  
19      made aware of some of the surveys, the productivity  
20      surveys we have carried out.

21                  MR. FREIDIN:   And, Mr. Chairman, the  
22      actual application of those surveys and a description  
23      of them is coming in Panel No. 7.

24                  THE CHAIRMAN:   You don't like Panel 15  
25      anymore?

1 MR. FREIDIN: We are moving everything up  
2 to 7. I have been challenged to see whether I could go  
3 through a week without saying 15.

4 THE CHAIRMAN: We were interested in the  
5 size, Mr. Freidin, of the Panel 7 witness statements,  
6 bearing in mind that from what we have on the record  
7 Panel 15 would probably cover 14 times the amount of  
8 evidence.

9 MR. FREIDIN: Well, I may in fact have to  
10 highlight Panel No. 15.

11 Q. Mr. Cary, you make reference to the  
12 computerized wood supply model, and could you perhaps  
13 just expand a little bit more on what you were  
14 referring to?

15 First of all, was the development of that  
16 computerized wood supply model that you referred to  
17 something which was a result of the Dixon Report?

18 MR. CARY: A. As a result of the  
19 discussions that emanated from the Dixon Report, and on  
20 page 264 of the panel statement, Document No. 33, Dr.  
21 Osborn mentions this version of the OWASFOP model that  
22 was developed in 1982.

23 Q. Dr. Osborn, I know that that model is  
24 going to be explained some days from now, perhaps you  
25 could advise the Board in a general way what was new

1 about the computerized wood supply model developed in  
2 1982?

3 DR. OSBORN: A. Two things really were  
4 different than what we did in '82 from that which was  
5 done in '72.

6 The first of the two things was a  
7 definite deliberate integration of the old forest and  
8 the new forest to analyze both those two forests, if  
9 you like, combined and what would happen to them over  
10 time. So there was a very definite intent to include  
11 the old forest, which you previously heard described  
12 was not explicitly included in 1972.

13 The second major difference was this  
14 effort to look at different levels of silvicultural  
15 intensity and assess what the different mixes of those  
16 levels would result in, again, rather than the  
17 simplistic 10 and 20 cunits per acre approach that had  
18 been taken in '72.

19 So a combination of the forests and a  
20 look at silvicultural investment over a range of levels  
21 were the two major differences that took place in the  
22 1982 analysis.

23 Q. And I understand that you will be  
24 explaining that model when in fact you speak to the  
25 wood supply scenarios in the latter part of this panel?



1 A. Correct.

2 Q. Mr. Cary, the second period that is  
3 referred to -- I am going back now to paragraph 22 --  
4 to 24 of the witness statement. The second time period  
5 referred to in those paragraphs is 1981-1987 and if I  
6 could refer you to sub-paragraph (ii) of 22, could you  
7 advise me whether there is any connection between  
8 paragraph 22, sub-paragraph (ii), and paragraph 22, sub  
9 (iii) that we spent some time on?

10 MR. CARY: A. Yes, there is.

11 Q. Could you explain the connection?

12 A. Paragraph 22 details some of the  
13 actions we took in response to some of the concerns  
14 that we -- that became apparent, I mentioned in  
15 22(iii). In order to take action, we -- the  
16 description of that action is outlined in 22(ii).

17 Q. Could you describe then the responses  
18 that were -- the responses to the observations referred  
19 to in sub-paragraph (iii) of 22 and give some sense of  
20 the magnitude of those responses?

21 A. Yes, I will. As the evidence  
22 statement says, between '81 and '87 there were large  
23 increases in the forest resources programs budget.

24 In 1981, that was the first year of the  
25 FMA program, it took some time to gear up, but there

1 was money coming into the program for road construction  
2 in the FMA program and silviculture and over that  
3 period there was roughly twice as much money for roads  
4 as there was money supply for silviculture by design  
5 because we had to put in that infrastructure. That was  
6 a response to the lack of our roading. We couldn't get  
7 to where we had to go.

8 So almost \$200-million I believe came  
9 into the program, into the FMA program, and was spent  
10 on enhancing of the forest access on Crown land in the  
11 agreements.

12 The FMA program engendered a need for  
13 more tree seedlings, and in 1981 we started a program  
14 of container production in the private sector. We went  
15 into a program with private entrepreneurs and  
16 contracted with them to produce seedlings, a very  
17 successful program now producing 80-million seedlings.  
18 And government supplied half of the original capital  
19 grant -- sorry, half of the original -- granted half of  
20 the original capital cost of the facility, and then  
21 through the course of buying trees, paid the rest off.  
22 That was something like \$13-million.

23 In 1984, the Canada/Ontario Forest  
24 Resources Development Agreement came into action. It  
25 was signed late in '83, and \$150-million came into the

1 program, much of that for silviculture. That was a  
2 cost-shared program, but it contained money for roads,  
3 money for research, money for technology as well, not  
4 only silviculture.

5 The Forest Management Subsidiary  
6 Agreement Program, chiefly roads, but also we expanded  
7 our permanent and improved our permanent nursery  
8 facilities, whether it was grading barns, whether it  
9 was storage facilities, whether we expanded the actual  
10 nursery production in the compartments.

11 We were faced with -- during that period,  
12 we were faced with much expenditure in fighting forest  
13 fires. We had a regular and high incidence of forest  
14 fires which consumed and exhumed a lot of our forests  
15 and had to be fought and suppressed.

16 Mr. Armson in his evidence in Panel 2  
17 told you of the occurrence of jack pine budworm and  
18 spruce budworm that came into the province from the  
19 east and traveled westwards. We also had in southern  
20 Ontario an outbreak -- a serious outbreak of gypsy  
21 moth.

22 All this cost money. So the money came  
23 in, but it wasn't necessarily spent all on  
24 silviculture, but that's the point we put facilities in  
25 place, the infrastructure, we spent money, but not

1 necessarily on silviculture.

2 Q. In your view the developments that  
3 you described in paragraph 22, sub (ii) have they had  
4 any effect on the Ministry's ability to deliver or meet  
5 the objectives that it has been setting over the years?

6 A. Absolutely.

7 Q. Positively or negatively?

8 A. Yes, absolutely positively.

9 Q. Mr. Cary, do you have a copy of the  
10 interrogatory asked by the Ministry of the Environment,  
11 Question No. 4?

12 A. Yes, I do.

13 Q. Does that particular answer in fact  
14 provide a breakdown of the amount of monies spent or  
15 allocated to permanent nurseries, greenhouse  
16 facilities, seed extraction plants and enhanced forest  
17 access road during the period between 1981 and 1987?

18 A. That's correct.

19 Q. The time period refers to in the  
20 paragraph that you finished?

21 A. That's correct.

22 MR. FREIDIN: Mr. Chairman, I apologize.  
23 I don't have extra copies, but I will have them  
24 tomorrow. I would like to file a copy of that  
25 particular question and answer.



1                   And, just for the record, the total  
2                   expenditures on those items between '81 and '87 was  
3                   \$324.1-million and there was a breakdown as follows:  
4                   permanent nurseries, 15.8-million; greenhouse  
5                   facilities, 6.6-million - which was 50 per cent of the  
6                   approved capital construction costs - seed extraction  
7                   cost was 4.6-million - and consistent with what Mr.  
8                   Cary said - forest access from all sources was  
9                   \$301.3-million.

10                   MR. CAMPBELL: Mr. Chairman, if that's  
11                   going to be filed tomorrow I wonder if Mr. Freidin --  
12                   when we had asked the question, the question states:

13                   "That between '81 and '87 we saw large  
14                   increases in forest resources program  
15                   budgeting. Between '81 and '87, what was  
16                   the allocation in funds and dollars  
17                   terms."

18                   And by that we had intended to ask and  
19                   intended to seek an annual breakout of those figures,  
20                   both, the global figures and sort of mass trends and  
21                   things like that.

22                   I wonder if Mr. Freidin could also, when  
23                   he provides that - it was something I was going to deal  
24                   with later in any event - provide the annual breakdown.

25                   MR. FREIDIN: Can I take that under

1       advisement? If it can be done without any difficulty  
2       I'm sure we can -- yes, we can.

3               THE CHAIRMAN: Sorry, you will provide  
4       that instead of that document, or are you going to --

5               MR. FREIDIN: No, let's give this  
6       document it has the total figures and maybe we can just  
7       attach any additional information to this exhibit.

8               THE CHAIRMAN: Very well, exhibit 140.

9               MR. FREIDIN: (handed)

10              THE CHAIRMAN: Thank you.

11       ---EXHIBIT NO. 140: Question and Answer to  
12                              Interrogatory Question No. 4 posed  
                            by MOE.

13              MR. FREIDIN: Q. Mr. Cary, looking  
14       through my notes - but I can't recall how much detail  
15       if any that you or time you spent on explaining why the  
16       amount spent on access road during that period 81-87 is  
17       indicated by the document that we just marked was so  
18       high in comparison to the others.

19              So at the risk of perhaps repeating  
20       yourself a little bit, can you advise me and advise the  
21       Board why is the number so high for road access?

22              MR. CARY: A. I think we have summed it  
23       up in the last sentence of paragraph 22 (ii) on page  
24       26. For us to properly utilize the old forest and get  
25       to those stands that should be harvested under an

1 approved management plan, and also to properly gain  
2 access for silvicultural treatments, regeneration and  
3 coming back to maintain that crop, to protect that  
4 crop, we need roads and without roading we face  
5 problems of getting back there to do the work that we  
6 should be doing.

7 Without permanent roads we face real  
8 problems in getting back to those areas to do what we  
9 should be doing, to ensure that those forest crops are  
10 going to be free to grow and part of our production  
11 base.

12 Q. Mr. Cary, in paragraph 22 sub (ii)  
13 there is reference to monies coming from joint  
14 agreements like the Canadian/Ontario Forest Resources  
15 Development Agreement.

16 Is this a common occurrence that the  
17 Ministry does receive funds from the Federal Government  
18 on a yearly basis?

19 A. Not on a yearly basis, but there have  
20 been quite a string of cost-shared agreements. The  
21 Canada/Ontario Forest Resources Development Agreement  
22 is one and the Forest Management Subsidiary Agreement,  
23 I neglected to mention, I'm sorry. That's another  
24 shared initiative between the Federal Government and  
25 ourselves. I am sorry for that omission.

1 Q. Can you give any general ballpark  
2 figure in terms of the percentage of the Ministry's  
3 budget that might be -- the total expenditures that  
4 might be in fact monies which were contributed by the  
5 Federal Government?

6 A. Well, if I can take the  
7 Canada/Ontario Forest Resources Development Agreement,  
8 over five years the size of that agreement - I think we  
9 are about into the last year - is \$150-million, of  
10 which there is a 50/50 split, dollar for dollar.

11 So the Federal Government has cost-shared  
12 this agreement to the tune of \$751-million over five  
13 years. The approximate size of the Forest Resources  
14 Program each year is about \$200-million.

15 THE CHAIRMAN: What is the full title of  
16 that agreement?

17 MR. CARY: Canada/Ontario Forest  
18 Resources Development Agreement. COFRDA for short,  
19 another terrible acronym, COFRDA.

20 MR. FREIDIN: Q. Can you advise very  
21 briefly, Mr. Cary - if you are able to - to advise of  
22 the sorts of activities that get funded under that  
23 particular agreement, whether it is a specific type of  
24 activity or is there a limitation on the type of  
25 activities that these monies are used for.



1                   MR. CARY: A. Approximately a hundred  
2 million of that agreement was spent on silviculture  
3 both on Crown land and some on private land, there was  
4 a private land forestry program in that particular  
5 agreement.

6                   The balance was spent on roads, research,  
7 technology, innovative programs, that sort of thing.

8                   Q. Innovative programs...?

9                   A. With regard to, for example,  
10 utilizing the forest better, coming up with new ideas  
11 that would make more efficient use of our resource.

12                  MR. FREIDIN: Okay. I am just wondering,  
13 Mr. Chairman, what time did you want to call it a day?

14                  THE CHAIRMAN: Not much further, are you  
15 entering into a new area?

16                  MR. FREIDIN: I am entering into a new  
17 paragraph, it is sort of a new area in that regard. I  
18 think I may be longer than we would like to finish, but  
19 I can finish fairly early tomorrow morning with this  
20 witness.

21                  THE CHAIRMAN: Well, I was going to  
22 suggest, if nobody objected, that we start tomorrow at  
23 8:30 since we are going to only be sitting until about  
24 four at the outside.

25                  So perhaps now would be a good time to

1 break.

2 MR. FREIDIN: Very well.

3 THE CHAIRMAN: The Board will adjourn  
4 until 8:30 a.m.

5 Thank you.

6 ---Whereupon the hearing adjourned at 6:10 p.m., to be  
7 reconvened on Tuesday, August 9th, 1988, commencing  
8 at 8:30 a.m.

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